年6月11日第三種郵便物認可　昭和27年8月8日国鉄特別扱承認雑誌第2335号　毎月1日発行　昭和32年7月1日発行

The ORIENTAL ECONOMIST

ESTABLISHED 1934

OL. XXV　JULY, 1957　No. 561

Girard Case

Economic Growth Rate

Bettering External Account

Kishi's Visit to Washington

Economic Cooperation in S.E. Asia

Nuclear Test Blasts Radiation Problem

Japanese Industry in High Gears

Whither Japan's Payment Position

National Income in 1956

Petroleum Refining

〒200

FOREIGN EXCHANGE BANK

★ OVERSEAS OFFICES ★
New York, Rio de Janeiro, Buenos Aires, London, Hamburg, Alexandria, Calcutta, Bombay, Karachi, Vientiane, Singapore, Hong Kong & 13 Representatives in Other Countries

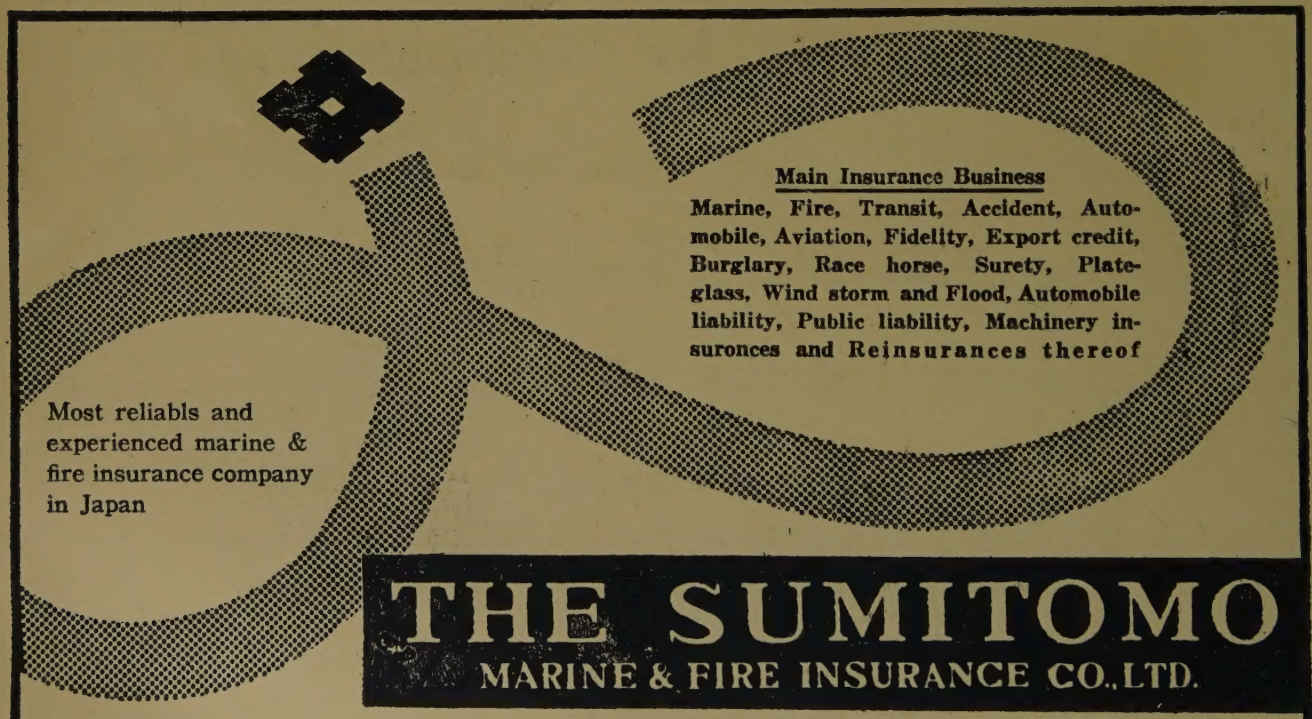
★ DOMESTIC OFFICES ★
Tokyo, Yokohama, Nagoya, Osaka, Kobe, and Other Main Cities in Japan

THE BANK OF TOKYO, LTD.

HEAD OFFICE: NIHOMBASHI, TOKYO, JAPAN

★ AFFILIATE ★
THE BANK OF TOKYO OF CALIFORNIA
San Francisco, Los Angeles, Gardena

★ SUBSIDIARY ★
THE BANK OF TOKYO TRUST COMPANY
New York



Main Insurance Business
Marine, Fire, Transit, Accident, Automobile, Aviation, Fidelity, Export credit, Burglary, Race horse, Surety, Plate-glass, Wind storm and Flood, Automobile liability, Public liability, Machinery insuronces and Reinsurances thereof

Most reliabls and experienced marine & fire insurance company in Japan

THE SUMITOMO
MARINE & FIRE INSURANCE CO., LTD.

President: T. HANAZAKI

Head Office: No. 1, Yaesu 2-chome, Chuo-ku, Tokyo, Japan
Cable Address: SUMITKAIJO TOKYO
Branches: Osaka, Kobe, Yokohama and throughout Japan

FOR
COMPREHENSIVE
BANKING and
FOREIGN EXCHANGE
FACILITIES

THE
MITSUBISHI BANK, LTD.

CAPITAL PAID-UP: ¥5,500,000,000
HEAD OFFICE: Marunouchi, Tokyo
BRANCHES: 155 throughout Japan
NEW YORK BRANCH:
120 Broadway, New York 5, N.Y.
LONDON BRANCH:
82, King William Street, London, E.C. 4

THE DAI-ICHI BANK, LTD.

Since 1873

Authorized Foreign Exchange Bank

Oldest in Years.

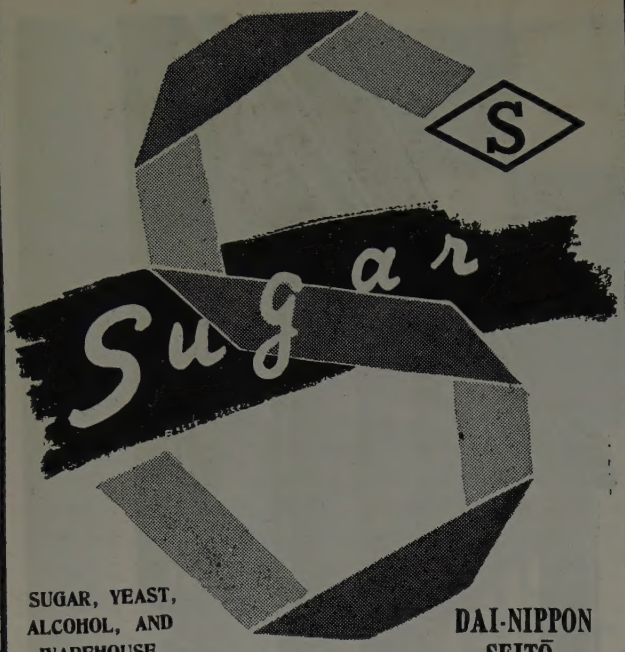
Modern in Service

Head Office:
Marunouchi, Tokyo, Japan

Overseas Representatives

Chicago Office:
38, South Dearborn St., Chicago 3, Illinois, U.S.A.

New York Office:
37, Wall Street, New York 5, N.Y., U.S.A.

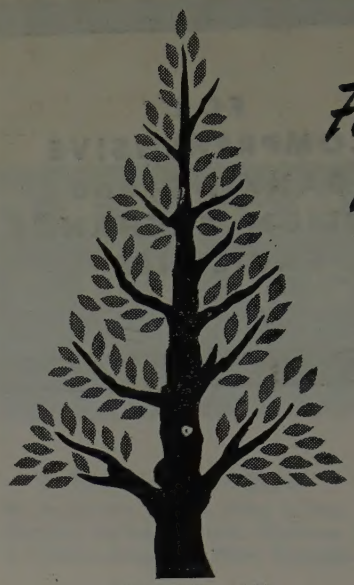


SUGAR, YEAST,
ALCOHOL, AND
WAREHOUSE

DAI-NIPPON
SEITŌ

DAI-NIPPON SUGAR MFG. CO., LTD.

PRESIDENT: AIICHIRO FUJIYAMA
4~1 Marunouchi Tokyo
Tel. (27) 0100~0109
Cable Address: SUGAR TOKYO



For your banking needs in Japan

ESTABLISHED: 1897

THE NIPPON KANGYO BANK LTD.

HEAD OFFICE: HIBIYA TOKYO
OVER 100 BRANCHES THROUGHOUT JAPAN
REPRESENTATIVE OFFICES: NEW YORK, TAIPEI

First Industrial Finance Since 1902

Founded in 1902 for the financing of Japanese industry in its incipient stage, the Bank has been closely identified with the subsequent development of Japanese industry. Along with its principal business of industrial financing including corporate trust service, the Bank furnishes complete service in international banking through a world-wide network of correspondents.

Branches: Osaka, Nagoya, Kobe and other principal cities throughout Japan

The INDUSTRIAL BANK OF JAPAN, Ltd.

Head Office: Marunouchi, Tokyo
New York Office: 30 Broad Street, New York 4, N.Y.

The ORIENTAL ECONOMIST

VOL. XXV JULY, 1957 No. 561

Contents

REVIEW OF THE MONTH : Page
Kishi's Visit to Washington 333
Economic Cooperation in S.E. Asia . . 334
Girard Case 334
Bettering External Account 335
BUSINESS INDICATORS :
Production • Consumer Demand • Inventories • Prices • Living Cost 336
MONEY & BANKING :
Busy Money Again • Money Hike Aftermath 338
STOCK MARKET :
Standstill • Price Changes • Marking Time 339
LEADING ARTICLES :
Economic Growth Rate 341
Whither Japan's Payment Position? . . 342
National Income in 1956 343
Japanese Industry in High Gears . . . 345
INDUSTRY :
Petroleum 350
VIEWS & TOPICS :
Nuclear Test Blasts Radiation Problem . 360
By Yoshio Hiyama
GLIMPSES OF JAPANESE CULTURE :
Japanese Garden 364
By Osamu Mori
KALEIDOSCOPE :
Exports of Technological Know-how • Steel Mills in Minas, Brazil • Local Government Officials by Parties • Productivity in Aircraft Industry • Steel Production Plan Revised • Increase of Tax Revenue • Machinery Orders • Plant Investment • Automobile Exports • Bigger Corporate Income 366
COMMODITY MARKET :
Cotton Goods • Chemical Fibres • Woollen Yarn • Raw Silk 367
FOREIGN TRADE :
Worsened International Payments • Higher Rates for Import Collaterals • Restraint on Special Foreign Exchange Allocations • White Paper on Trade • 368
INVESTMENT OUTLOOK :
Nippon Express • Fuji Iron & Steel • Mitsubishi Shoji 370
LABOR :
Season for Labor Union Meetings • Punishments to Railway Union Leaders 374
BOOK REVIEW 375
STATISTICS : 376

Entire Contents of this publication are copyrighted. The Oriental Economist does not necessarily endorse the views expressed by authors of signed articles.

Single copy ¥200; Annual subscription ¥2,400; Overseas ¥2,700 ($10). Airmail N. America ¥4,080 ($13.85); Europe ¥5,760 ($18.53).

Published monthly by The Oriental Economist, Nihonbashi, Tokyo, Japan. Tel. (24) 4111.

Review of the Month

PRIME Minister Nobusuke Kishi left Tokyo by air on the night of June 16 on his official visit to Washington. He is scheduled to confer with President Dwight Eisenhower, Secretary of State John Foster Dulles and other top leaders of the U.S. Government for three days from June 19 through 21, and will be back to Tokyo on July 1. Commenting on his forthcoming talks with Washington executives prior to his departure, Prime Minister Kishi stated that he would confer with U.S. leaders not to make any specific arrangements as his contacts would be devoted solely to the exchange of frank opinions on the basic problems outstanding between the United States and Japan and the further promotion of mutual understanding between Washington and Tokyo. Hence, he reiterated, "no tangible results are to be expected."

KISHI'S VISIT TO WASHINGTON

Prime Minister Kishi's visit to Washington is, none the less, extremely significant even for enabling the supreme leaders of the two countries to take clearer stock of the positions in which they stand, as mutual understanding is an indispensable prerequisite to the settlement of all problems. Tangible results of Mr. Kishi's visit to Washington, therefore, should rather be expected after his return from the official tour. Meanwhile, State Secretary Dulles, clarifying the American view of the U.S.-Japan talks to be held during Mr. Kishi's visit at a press conference in Washington on June 11 said that he considered the forthcoming visit to Washington of Prime Minister Kishi as very important because it comes at a time when Japan is achieving a new and more important position in the world. He added that Kishi's visit to the United States came to a formative period in relationships between the United States and Japan. The State Secretary said Japan has been in the process of reestablishing herself as a potentially great power and that there is a growing feeling in Japan that Japan is entering a new era in her relationships with the rest of the world. Hence, he continued, American officials consider that the June 19–21 visit of Prime Minister Kishi to Washington will constitute a very important meeting, coming at a very important time. Many and complicated are the problems pending settlement or closer studies between Washington and Tokyo in various phases, political, economic and defense. On the list of these problems what are likely to be picked up for discussion in Washington during Mr. Kishi's visit, however, will be: a) Japan's defense issue including the Mutual Security Pact; b) The problem pertaining to the positions of the Okinawa and Bonin Islands; 3) Economic cooperation between the U.S. and Japan; d) A formula for U.S.-Japan cooperation in Southeast Asia; e) Trade with Communist China; f) Release of Japanese war prisoners; and g) Ban on A–H Bomb tests.

MANY of the major problems between the U.S. and Japan demanding closer scrutinies by top leaders are naturally concerned with Asia. Outstanding among them is the problem of economic

cooperation in Southeast Asia. It was undoubtedly in expectation of this fact that Prime Minister Kishi made a tour of major Southeast Asian countries prior to his visit to Washington. It appears very likely that problem of a Southeast Asia development fund suggested by Mr. Kishi in the course of his Southeast Asian trip will be on the list of subjects at the forthcoming U.S.–Japan talks in Washington. The outstanding feature of Mr. Kishi's conception of a Southeast Asia development fund is a special arrangement to give the equal voice to fund-supplying nations and recipient countries in the manipulation of the fund with no "strings" to be attached to any beneficiary countries concerned. It has become apparently clear that Southeast Asian countries, increasingly independence-conscious, reject any political yokes through the acceptance of aids extended by other countries.

ECONOMIC COOPERATION IN S.E. ASIA

To aid the economic growth of Southeast Asian countries where economic developments are somewhat belated so that the standards of living of their peoples may be elevated is essential not only from the political standpoint of preventing them from joining the Communist camp. There is no doubt that the economic prosperity which they are enabled to attain will sooner or later be returned indirectly to aiding countries as economic dividends. Mr. Kishi's plan of a Southeast Asia development fund appears completely flawless. Ideals and realities, however, oftentimes disagree. In the actual enforcement of this plan, many obstacles are apparently in store. For one thing, the Colombo Plan has already been in operation for Southeast Asia in the past five odd years with some success. Loans extended to the Southeast Asian area by the International Bank of Reconstruction and Development and the Export-Import Bank have also been comfortably bulky. Hence, how to adjust relations between these organs and the proposed Southeast Asia development fund present a big problem. Those supporting the development fund plan point out that the functions of the Colombo Plan are not fit for handling development projects involving two or more countries as its technical aid activities and financial assistances operations are not well unified and coordinated because of the lack of a permanent secretariat, and that it does not take into consideration the need for stabilizing the prices of farm products, particularly rice, as staple products of Southeast Asia. Hence, they claim, the proposed development fund has a sufficient raison d'etre if it is tasked with assignments to make up for such defects. It is problematic, however, whether the participation of European and American countries may well be expected only on these grounds. It appears that the sponsors of the new development fund are depending on the United States for the supply of the largest portion of the funds needed, but that country certainly has its own conception of development funds of the kind. Prime Minister Kishi stated that he would seek the understanding of U.S. leaders about the fundamental principles of the new fund plan on the basis of which U.S. aid funds may be granted for the economic developments of Southeast Asia and particularly through tieups with Japanese industrial techniques.

U.S. aid to the new fund, if available, is quite welcome, but it is considered equally essential for Japan to study concrete measures to carry out the plan independently in case such American assistance is not forthcoming. Large-scale economic aid alone is not the only form of economic cooperation. There must be some measures, although steady and conservative, by which Japan may possibly extend friendly cooperation in fund and technique to her Southeast Asian partners. Japan at this juncture should start her economic aid operations in a way possible within her power. Japan cannot draw back simply because Washington is not inclined to lend a hand. Otherwise, Japan's enthusiasm for economic cooperation is apt to be called in question by Southeast Asian allies.

GIRARD CASE

U.S. public opinion has been boiling over the jurisdictional issue surrounding the Girard Incident. The case concerns the shooting and killing of a Japanese woman by U.S. Army Specialist 3.C. William S. Girard at the Camp Weir firing range, Gumma Prefecture, Japan in January, this year. The U.S. Government, sufficiently informed of actual facts of the case and well aware of international repercussions, has abandoned the primary right to exercise jurisdiction over the case, but this action has been bitterly opposed by part of American public opinion. The point of view generally entertained by the Americans is apparently represented by a statement made by Girard's attorney, Earl J. Carroll of New York, who asked for a writ of habeas corpus. He argued that the incident happened when the U.S. soldier was on official duty guarding American property. He added that Japanese courts are not properly equipped with measures to protect the rights of defendants and that the U.S. Government cannot turn Girard over to a Japanese court without infringing upon his constitutional rights.

The Japanese Government, on its part, clarified its view on the case for the first time on June 10 through Justice Minister Umekichi Nakamura, who asserted that Carroll's argument was based solely on the point that the incident took place within a U.S. camp in Japan in entire disregard of the fact that Girard's action, which caused the death of Mrs. Naka Sakai, the victim, was a complete departure from his duty. Minister Nakamura's statement, however, was so brief and simple without touching upon the truth about Girard's action that it would not be enough to convince the American people why Japan is demanding so strongly the right to judge the American soldier.

The real circumstances under which the incident took place, mutually acknowledged as authentically true by the Japanese and American authorities concerned on the basis of testimonies given by witnesses, stand as follows: "On January 30, the day when the incident took place, U.S. Army Specialist 3/C William S. Girard was ordered to guard a machine gun emplacement with his companion, SP 3/C Victor N. Nickel. The deplorable incident happened shortly later. Girard, according to the testimonies of eyewitnesses, threw expended shell casings and said in Japanese 'Papa-san daijobu, mama-san daijobu' (Pop, it's all right, mom, it's all right) to Eiji Onozeki (30) and Mrs. Naka Sakai (46), two Japanese who were around to pick up fired shells. While the two

Japanese were engrossed in gathering expended shells scattered, Girard suddenly placed an empty cartridge casing into his rifle's grenade launcher and shot Mr. Onozeki, who escaped. The second shot fired at the back of Mrs. Sakai, also fleeing, caught her at the distance of about 8 metres, and she died on the spot from excessive bleeding." The Japanese and American authorities, agreed on the testimonies by witnesses on these facts, were at first still divided on the interpretation whether Girard was then on duty or not. The American side insisted that Girard was on official duty guarding American Army property while the Japanese side contended that his action, although it might be taken during duty hours, was still a complete departure of official duty. Finally, the Japanese view prevailed and the American side agreed to abandon the primary right to exercise jurisdiction over the case in conformity with the provisions of the U.S.-Japan Administrative Agreement. Japanese public opinion has continued rather calm, considering that the opposition of the American public would cool down sooner or later as actual facts about the case become known and the U.S. Government is certain to abide by international faith. In the minds of the majority of the Japanese people, however, the view of Japan and things Japanese as manifested by a certain section of the American people in connection with the present case is highly regrettable. Distrust in the courts of foreign countries with all the differences in national traits and customs is quite justifiable, and the Japanese people do not take the mistrust in Japanese courts entertained by the Americans as signifying their contempt of Japan as an "uncivilized" country. What is not entirely unacceptable to the Japanese is their attitude that Japan should unconditionally be at the U.S.'s beck and call as American soldiers are protecting Japan. Even the group of Japanese appreciative of the defense assistance by the U.S. Forces will not acquiesce in unreasonable and intolerable demands. It should be noted that many in Japan are opposed to the stationing of the American Forces in this country, as well indicated by the fact that Diet members protesting against the stationing account for one-third of the total seats in both Houses. In sum, it appears certain that the present controversy over the Girard case has its root in the apparent ignorance among the American public of Japan and things Japanese. It is thus urgently incumbent upon us to try to bring the Americans into closer contact with Japan.

BETTERING EXTERNAL ACCOUNT

With the object of remedying the aggravated international account, the Government on June 19 decided upon an emergency economic policy. The new integrated economic policy comprising emergency measures applicable to fiscal, trading, financial and industrial phases of the nation's economic life has become necessary to cope with the unabated pace of import increases and the dwindling balance of foreign currency holdings despite a series of tight-money measures adopted in the wake of the elevation of the Bank of Japan discount rate on May 6 (refer to "Whither Japan's Payment Position?" in this issue). The salient points of the emergency policy are as follows: 1) In the enforcement of the state investment and loan program, the Government expects to slash all non-important business and industrial enterprises and to postpone new and expansion schemes in key industries so that the state investment and loan program may be carried forward to the next fiscal year by a total of 15 percent (about ¥61 billion); 2) As to expenditures for public enterprises in the general account, supply-demand positions of necessary materials and the progress of operations will be properly adjusted in order to properly defer the dates of completion; 3) Further loans by the Bank of Japan will be positively checked; 4) Public and banking corporation debentures purchased and held by the Trust Funds Bureau amounting to ¥70 billion will be sold only when the over-withdrawal of state funds begins to ease or when a state of over-payments begins to appear; 5) In order to prevent or minimize the unfavorable effects of the tight-money policy on smaller businesses and industries, approximately ¥15 billion in loans will be made available quickly to such smaller enterprises through competent financing organs; 6) Export financing operations will be given special priority, and the discount rate of export advance bills will be reduced by 0.1 *sen* per diem per 100 *yen* (1 *yen*=100 *sen*) (to 1.6 *sen* for qualified rediscount bills and 1.7 *sen* for qualified secured bills). The system of extending loans secured by foreign exchange will be partially extended; 7) The interest rates for fixed deposits and public corporation debentures will be raised; 8) Equipment investments even by key industries will be deferred in accordance with economic requirements; 9) For promoting exports, measures to improve the systems of taxation, insurance, exchange control, etc. will be adopted in addition to the economic measures already enumerated; 10) Relative to imports, the 5 percent guarantee money will be newly required to be deposited in cash with the Bank of Japan even for the items for which deposits by Ls/C sufficed in the past. The rates of guarantee money will be elevated for other items.

Of these 10 measures under the new policy, Items 6 and 10 were immediately enforced (as from June 20) while the operation of other items have been left for future application. The outstanding feature of the new emergency policy is the application of restrictive measures to the financial phase, as the Government is apparently determined not only to demand the postponement of part of the state investment and loan program but also the spending for public enterprises in the general account.

Such economization and deferment steps in the financial phase, side by side with monetary squeezing measures the Government is planning to enforce through the Investments and Loans Committee and the Funds Council, are expected to prove sufficiently effective in curbing private plant-equipment spending. Through these steps, the Government expects to curtail plant and equipment investments by private quarters, estimated at ¥850,000 million in fiscal 1957, by about 20 percent (¥170,000 million). In other words, the Government is planning to dwarf direct purchasing power to about ¥231,000 million, inclusive of a ¥61,000 million cut in state fund investments and loans. The curtailment of this size, however, is not expected to deal a particularly heavy blow to the Japanese economy now sound and flexible. Hence, the balance of Japan's international payments may well be normalized again without subjecting the national economy to any acute depression within the current year if, as Finance Minister Ikeda stated, private financiers and industrialists are actually ready to cooperate in rationally restricting equipment investments.

Business Indicators

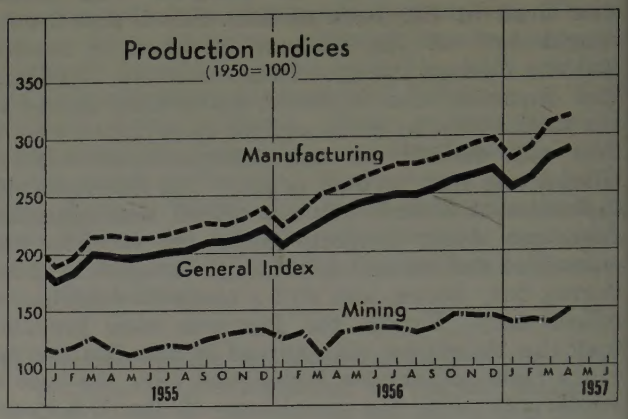
Production :—Production in April picked up energetically as the coal miners strike was settled and the power supply became normalized. For instance, mining went up 7.1%, chemicals bulged 6.2%, textiles hiked 3.5%, ceramics rose 2.4% and machinery gained 2.3% over the March equivalents. Thus, production as a whole (inclusive of mining and manufacturing) registered a gain of 2.3% over March and 22.6% over a year ago. Outstanding on the list of gainers was railway rolling stock which recorded a 2.5-fold increase over a year ago while machinery, steel ships, rubber, and petroleum and coal products forged ahead by 35% to 55%. The lively pace of production expansion in April was principally attributable to the continued animation of plant-equipment investments in key industries including the so-called "bottleneck industries." Orders for machinery and equipments received in March, for instance, totalled ¥94,500 million, up 50% over February contracts and more than double the indents received a year ago. The current tempo of production increase, however, is not expected to continue unmolested in the future, as the new tight-money measures adopted by the Government are certain to compel some of plant-equipment investment plans in key industries based on the state fund loans and investments program to be postponed. The seasonal dip in demand during summer will offer an additional damper. Some economists, however, opine that the enthusiasm for new investments in industrial circles is still high, and hence plant-equipment investment operations are not expected to come to a standstill easily. Whether their prediction is hitting the mark is highly problematic, as the machinery industry, one of the "bottlenecks," apparently has grown cautious and is ready to curtail its equipment expansion plan, and other key branches like power, iron-steel and coal may eventually be forced to follow suit.

1. APRIL PRODUCTION INDICES

(1950=100)

	March, 1957	April, 1957	Against March, 1957	Against April, 1956
Mining-Manufacturing	281.4	287.8	102.3	122.6
Mining	138.2	148.0	107.1	114.5
Manufacturing	310.9	316.6	101.8	123.5
Iron & Steel	270.2	271.3	100.4	118.2
Non-Ferrous Metals	228.3	211.2	92.5	112.5
Machinery	386.2	394.9	102.3	155.0
Steel Ships	762.2	762.2	100.0	143.6
Rolling Stocks	256.7	256.7	100.0	250.7
Textiles	336.2	348.1	103.5	120.4
Paper & Pulp	328.7	324.5	98.7	119.3
Chemicals	267.1	283.7	106.2	116.7
Pharmaceuticals	1,148.6	1,148.6	100.0	93.9
Oil Products	638.5	633.0	99.1	135.7
Ceramics	258.5	264.6	102.4	120.9
Rubber Goods	234.9	235.0	100.0	142.5
Leather Goods	295.7	297.1	99.8	107.8
Daily Necessaries	257.2	253.4	98.5	110.3
Lumber	173.9	173.9	100.0	101.5
Foodstuffs	198.9	189.0	95.0	96.0
Tobacco	138.6	140.6	101.4	100.9

Source: MITI.



Consumer Demand :—Consumer demand has continued hiking on the dual strength of a two-year-long business boom and a ¥100,000 million tax cut. The increasing pace of consumer demand in recent months has been so brisk that some circles have begun warning against the possible advent of a consumer demand boom. In closer analysis, however, the tempo of consumer demand gain has been firm and steady without any signs of reckless spending. Department store sales in March totalled ¥26,000 million, up 27.9% over those a year ago, but the sharp bulge was largely due to seasonal stimulants (such as the close of the fiscal year and the start of the school year). The rising tempo has already begun to slacken. To cite a concrete instance, the sales of department stores in the Tokyo area in March increased 24.4% over a year ago, but the increasing rate slipped to 17.6% in April. Almost the same was the case of popular propensity to consume as noted from the household budgets of all urban wage-earners. Such consumption propensity for the first three months (January to March) this year stood at 95.4% against saving propensity, somewhat higher than 93.7% for the corresponding period a year ago, but dropped to 92.8% in April. Thus, consumption propensity has continued fairly steady, and no fear of the advent of a consumer spending boom is in evidence.

2. DEPARTMENT STORE SALES

	1955		1956	
	¥100 million	Indices (A year ago as 100)	¥100 million	Indices (A year ago as 100)
September	124.5	111.9	156.5	125.7
October	173.7	100.4	208.8	120.2
November	195.3	112.4	235.2	120.4
December	410.2	111.6	525.7	128.2
January	145.8	113.6	172.3	118.2
February	145.3	120.4	176.0	121.1
March	203.1	117.2	260.0	127.9

Source: Compiled by *The Oriental Economist* from MITI figures.

Inventories :—With production continuing at a high level and consumption moving at a steady pace, inventories of manufactured goods have begun to

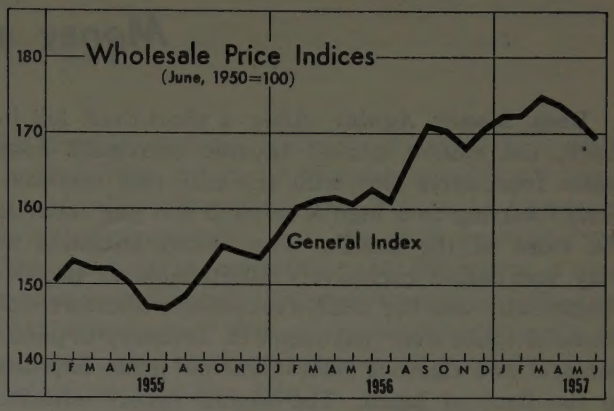
mount in recent months. Inventories in the hands of producers as of April this year were 4.6% larger than the balance for March and 17.2% heavier than a year ago. Such gains were especially bulky with textiles and non-ferrous metals which rose by more than 40% as compared with a year before while stocks of machinery were up 30%, coal-petroleum products gained 21% and rubber goods stood 19% higher. Inventories of manufactured goods held by merchants as of March were also 24.5% higher than a year ago. With consumer demand due to dwindle under the impact of tight-money measures, merchants are certain to restrain new stocking operations, and inventories in the hands of producers are bound to swell sharply. Well reflective of a new spurt in imports, inventories of raw and processed materials have been surging up with the April-end balance 52.2% larger than a year ago. Of the overall balance, stocks of imported materials alone bulged as much as 65.9%.

3. INDICES OF MANUFACTURERS' INVENTORIES
(1950 average=100)

	March, 1957	April, 1957	Against March, 1957	Against April, 1956
Mining-Manufacturing	140.3	149.6	104.6	117.3
Mining	49.8	54.3	109.0	101.9
Manufacturing	154.9	161.7	104.4	118.0
Iron & Steel	164.0	168.9	103.0	102.7
Non-ferrous Metals	87.0	89.9	103.3	140.5
Machinery	177.9	177.5	99.8	130.4
Textiles	140.4	149.1	106.2	143.1
Paper, Pulp	234.5	222.5	108.8	71.5
Chemical	243.2	234.4	96.4	110.2
Petroleum, Coal Products	157.5	191.1	121.3	121.3
Ceramics	121.6	128.9	106.0	96.4
Rubber Goods	210.5	233.8	111.1	119.3
Hides, Leathers	105.3	108.8	103.3	101.8
Others	135.5	104.1	98.7	122.5

Source: MITI.

Prices:—The march of wholesale prices, on without a break since the turn of the year, came to a standstill in April and began to soften from May. The drops of wholesale prices during the months, of March to May reached 5.7% for foodstuffs, 3.3% for metals, and 2.6% for textiles. Machinery and chemical products also grew increasingly soft during these two months. On the other hand, fuels, building materials and the miscellaneous group (paper-pulp, rubber and hides-leathers) continued stiff. In other words. the slips mostly marked consumer goods (down 4.5% as a whole) while producer goods managed to remain almost intact. Thus, the overall average of wholesale price indexes declined 1.5%. The wholesale prices continued softening in June as the seasonal hike marked food deliveries while textiles dipped due to overproduction. Another noteworthy trend on the wholesale price front in June was the steady weakening of fuel items (particularly coal) and building materials (chiefly lumber), the two key gainers, apparently due to the expected lull in plant-equipment investments resulting from tight-money measures. The elevation of the consumer price of rice, being planned by the Government, may serve as a new



stimulant to the hike of wholesale prices, but its effect will be overshadowed by plentiful supplies of imported raw and processed materials and the increasing signs of overproduction. The prospective strengthening of the tight-money policy will further enfeeble the wholesale price front.

4. WHOLESALE PRICE INDICES
(June, 1950=100)

	May, 1956	March, 1957	May, 1957	Against March, 1957	Against May, 1956
Total Average	160.7	174.6	172.0	98.5	107.0
Foodstuffs	142.8	164.8	155.4	94.3	108.8
Textiles	100.6	89.2	86.9	97.4	86.4
Fuels	162.4	174.2	180.2	103.4	111.0
Metals	277.6	307.4	297.3	96.7	107.1
Machinery	183.2	200.6	200.3	99.9	109.3
Building Materials	212.4	248.6	254.8	102.5	120.0
Chemicals	105.6	108.9	108.8	99.9	103.0
Sundries	134.2	137.7	140.7	102.2	104.8
Producer Goods	174.9	186.8	186.8	100.0	106.8
Consumer Goods	135.9	152.8	145.9	95.5	107.8
Investment Goods	246.4	276.5	273.2	98.8	110.9

Note: As of mid-month.
Source: Economic Planning Board.

Living Cost:—Consumer prices, well outpaced by wholesale prices, have been rising within a narrower range. With the average gain of wholesale prices during the year ended April reaching about 7.0%, the increase of consumer prices in the interim amounted to only 1.9%, as the food and clothing expenses, remaining almost unchanged, offset the hikes of the light-fuel and housing expenses. Under these circumstances, consumer prices continued to remain firm in April despite the softening tone of wholesale prices and threaten to surge up instead in the future, although any hike to come will be restricted in scope and extent.

5. TOKYO CONSUMER PRICE INDICES
(1951=100)

	March, 1957	April, 1957	Against March, 1957	Against April, 1956
Total Average	120.6	120.7	100.1	101.9
Foodstuffs	116.6	116.1	99.6	101.7
Staple	121.5	121.8	100.2	100.2
Non-staple	114.1	113.1	99.1	102.4
Clothing	82.7	81.8	98.9	100.5
Light-Fuel	146.5	145.0	99.0	105.1
Housing	145.8	148.2	101.6	104.8
Miscellaneous	142.1	144.7	101.8	101.8

Source: Bureau of Statistics, Prime Minister's Office.

Money and Banking

Busy Money Again:—After a short-lived lull in April, the money market became extremely busy again from early May with the call rate (unconditional) soaring to a high level of 5 sen per diem at the close of the month. The money stiffening in May was almost exclusively attributable to two developments—another sizable excess of withdrawals of financial funds over payments (a Treasury-to-public balance) and rigorous restrictions on loans imposed by the Bank of Japan. The original expert estimate placed the prospective excess of financial fund withdrawals in May at around ¥50,000 million (¥30,000 million in the General Account and ¥20,000 million in the Foreign Exchange Account). It actually turned out, however, that the withdrawal excess for the month reached a bulky total of ¥93,600 million, including ¥46,000 million in the General Account and ¥47,600 million in the Foreign Exchange Account. This volume was about twice the original estimate and more than double the amount of over-withdrawals for the same month a year ago. On the other hand, the demand for funds continued energetic throughout May, despite various restrictive measures taken, including the elevation of the official discount rate on May 8 (second for this year), stronger restraints on loans by the Bank of Japan, the raise of city money rates, and the tightening of import financing. In the accounts of all banks throughout the country, loans registered the comfortable gain of ¥62,600 million, far eclipsing the hike of real deposits at ¥56,200 million.

With the financial funds thus registering a huge excess of receipts over payments and the demand for funds continuing active, Bank of Japan loans in May increased ¥51,600 million to the month-end balance of ¥312,600 million.

Money Hike Aftermath:—Against the bulky excess of financial fund withdrawals as the major background, the Ministry of Finance, in collaboration with the Bank of Japan, adopted the following money-tightening measures from May through June: 1) May 7: The Bank of Japan announced the elevation of official discount rate by 0.2 sen per diem, effective as from May 8; 2) May 8: The Ministry of Finance notified the bulky withdrawals of governmental foreign currency deposits entrusted to 11 city banks; 3) May 11: The Money Rate Adjustment Council decided on the raise of interest rates on deposits and loans by 0.1 sen, effective as from May 13: 4) May 13: The Ministry of Finance decided on the curtailment of the list of articles subject to pound sterling usances and the reduction of the usance term, effective as from May 14; 5) May 13: The Bank of Japan asked the nine leading banks in the Tokyo area to squeeze the total amount of loans extendable in May to ¥30,000 million; 6) May 15: Exchange banks decided to raise the interest rate on loans against import bills from 2.0 sen to 2.2 sen per diem; 7) May 21: Governor Masamichi Yamagiwa of the Bank of Japan explained the strengthened tight-money policy to its branch chiefs; 8) May 24: Twelve exchange banks decided on the elevation of the interest rate on loans by 0.25% per annum; 9) May 27: The National Banking Association at its directors' meeting decided to abolish the previous agreement to fix the interest rate on loans to shipbuilding projects with own funds at 2.6 sen per diem. Thus, all banks have become free to raise respective interest rates concerned; 10) May 28: The Bank of Japan asked nine city banks in the Tokyo area to restrict the amount of loans to be extended in June within the frame of repayments collected, and to endeavor to reduce the overall balances of loans in July through August; 11) May 29: Governor Yamagiwa of the Bank of Japan told a regular press conference that the elevation of interest rates on long-term loans might be considered, depending on future economic developments; 12) June 3: The Ministry of International Trade & Industry decided to raise the rate of guarantee money for the importation of specific items (such guarantee money to be deposited with the Bank of Japan); 13) June 5: Governor Yamagiwa stressed the gravity of the economic situation at the National Bankers Convention in Osaka and urged the whole-hearted cooperation of all bankers in the enforcement of the tight-money measures; 14) June 8: The Ministry of International Trade and Industry strenghtened the allocation restrictions in the special allocation system under the first-half foreign currency budget, thus substantially forcing the delay of the importation of specific items.

Meanwhile, as the money market began to stiffen markedly under the impact of tight-money measures, the call rates started to rebound sharply with the standard rate (unconditional) in the Tokyo call market leaping to 4.3 sen (4.6 sen in some cases) at the close of May. In Osaka, the jump was far more drastic with the standard rate rising to 4.8 sen (5.0 sen in some transactions).

MONEY IN MAY
(In ¥100 million)

	May, 1957	April, 1956
Note issue (April end)	6,837	5,837
Note issue (May end)	6,391	5,614
Decrease	446	233
Financial funds (1)	(w) 936	(w) 454
Short-term govt. bonds (2)	1	(d) 3
Bank of Japan accounts (3)	489	124
Loans	516	46
(Balance)	(3,243)	(230)
Short-term bond purchase	1	210
Long-term bond purcease	5	(d) 15
Private deposits	(d) 3	189
Others	(d) 30	(d) 202
(1) (2) (3)	(d) 446	(d) 233

Source: Compiled by *The Oriental Economist.*
Note: (w) withdrawal excess; (d) decrease.

Stock Market

Standstill:—After a series of collapses following the elevation of the official discount rate announced by the Bank of Japan on May 8, the stock market began to steady from early June. In the absence of particular spurs, however, the market undertone continued lethargic. According to the Tokyo Securities Exchange, the Dow-Jones average of the 225 industrials started to slip after having hit a new high at ¥595.46 on May 4. The dropping tempo got accentuated from May 8 and dipped to ¥512.60 as of May 30, a sharp loss of ¥82.86 or 13.89% from the May 4 high and a new record loss within less than a month in recent years. The market began to recover from May 31, but the rally was slow and tardy. As of June 12, the Dow-Jones average registered ¥524.46, a meagre hike of ¥11.86 or 2.81% from May 30. The average quotation for the first 12 days of June (1st to 12th) stood at ¥520.06, well above the monthly averages below the ¥500 mark up until October, 1956, but far behind the monthly averages in and after November. The volume of turnovers dwindled accordingly, with the daily average from June 1 through 12 registering 13,537,000 shares, a new low since September, 1956 when the average dived to 12,127,000 shares. With no dependable stimulants in prospect, the market is bound to continue quite throughout June into July.

1. AVERAGE SHARE PRICES AND DAILY TURNOVERS

	Share Price (Yen)			Average Daily Turnovers (1,000 shares)
	High	Low	Average	
1956: July	502.14	482.87	490.81	16,042
August	507.31	493.69	503.03	15,450
September	492.92	482.70	487.24	12,127
October	508.98	487.15	496.19	19,996
November	556.58	512.94	532.76	39,673
December	566.30	542.91	554.92	28,163
1957: January	586.01	549.45	572.80	39,771
February	587.88	562.91	573.99	30,390
March	587.00	560.27	567.73	27,692
April	593.47	581.03	587.55	31,920
May	595.46	554.71	547.58	29,806
June	524.46	517.01	520.06	13,537

Price Changes:—In the course of the overall price collapse during the period from May 4 to 30, two groups registered falls exceeding 20.0%—shippings (down 21.35%) and real estates (down 20.14%). The probable deterioration of business results due to the decline of freight rates was responsible for the retreat of the shipping group while the inclusion of some "semi-speculative" shares (such as Mitsubishi Real Estate and Heiwa Real Estate) accounted for the fall of the real estate group. Also drastic was the decline of the transportation machinery group (down 19.51%), apparently in reaction of a series of aggressive gains registered in the past on the strength of fair showings by such leaders as shipbuildings and automobiles. Other major losers included the mining group including coal and petroleum (down 18.34%); chemicals, comprising fertilizers, soda, explosives, oils and fats, pharmaceuticals, paints, etc. (down 17.94%); the machinery group (down 17.58%); primary metal such as steel and aluminium (down 17.04%); and electric machines and tools) (down 15.44%). Also noteworthy were the drops of

2. SHARE PRICE MOVEMENT BY GROUP

	Feb. 12 (Yen)	Mar. 11 (Yen)	May 4 (Yen) (A)	May 30 (Yen) (B)	June 12 (Yen) (C)	(A–B) (Yen)	%	(B–C) (Yen)	%
Average of 225 Pivotals	565.46	554.71	595.46	512.60	524.46	82.86	13.89	11.86	2.31
Fisheries	164.66	153.38	164.66	142.86	145.11	21.80	12.63	1.25	1.57
Mining	443.61	410.67	443.61	362.22	383.33	81.39	18.34	1.11	0.30
Foodstuffs	1,027.00	967.00	1,027.00	925.00	944.67	102.00	9.93	19.67	2.12
Textiles	575.44	542.32	575.44	499.62	510.83	75.82	13.17	11.21	2.24
Paper, Pulp	715.10	670.31	715.10	639.58	651.56	75.52	10.56	11.98	1.87
Chemicals	391.62	358.32	391.62	321.36	329.51	70.26	17.94	8.15	2.53
Petroleum, Coal Products	1,613.56	1,501.69	1,613.56	1,379.66	1,479.66	233.90	14.49	100.00	8.25
Glass, Clay, Stone Products	972.63	893.68	972.63	845.26	862.11	127.37	13.09	16.85	1.09
Primary Metals	209.07	191.50	209.08	173.44	178.81	35.64	17.04	5.37	3.09
Machinery	341.85	312.36	341.85	281.74	286.24	60.11	17.58	4.50	2.59
Electric Machines, Tools	348.37	322.83	348.37	294.57	301.11	53.80	15.44	6.54	2.53
Transportation Machinery	346.06	315.75	346.06	278.52	283.05	67.54	19.51	4.53	1.62
Precision Machines	340.77	310.77	340.77	296.92	299.23	43.85	12.86	2.31	0.77
Other Manufacturing	479.83	459.88	479.83	432.85	446.51	46.98	9.77	13.66	3.15
Commerce	1,164.29	1,086.43	1,164.29	987.86	1,012.86	176.43	15.15	25.00	2.53
Banking, Insurance	609.12	593.20	606.12	579.59	583.67	26.53	4.37	4.08	0.70
Real Estate	1,578.69	1,422.95	1,578.69	1,260.66	1,301.64	318.03	20.14	40.98	3.25
Land Transportation	374.05	366.86	374.05	358.94	360.93	15.11	4.03	1.97	0.54
Ocean Shipping	287.40	264.23	287.40	226.02	229.27	61.38	21.35	3.25	1.43
Warehousing	942.50	862.50	942.50	767.50	775.00	275.00	18.56	7.10	0.92
Electricity, Gas	210.74	208.46	210.74	203.56	204.63	7.18	3.40	1.07	0.41
Service Professions	345.10	341.63	345.10	329.24	322.03	15.86	0.45	(↔) 7.21	2.19

Source: Compiled by *The Oriental Economist*.

warehousing (18.56% down) and commerce (15.15% down). The declines of all these leaders were mostly reactionary to active gains in the past. On the other hand, the recession was rather restricted for banking and insurance (4.37% down), land transportation (4.03% down) and electricity and gas (down 3.40%, as these groups, comprising mostly semi-public utilities, had not made excessive gains in the past. The service professions group, which had been subject to successive drops before, lost only 0.45%.

The recovery from early June was not equal and overall for all groups. In the comparison of the May 30 quotations (when the month's low was registered) and the June 12 prices, the petroleum and coal products group is noted to have attained the sharpest recovery of 8.25%. This group, which lost 14.49% during the period from May 4 to 30 (as compared with the overall average loss of 13.89% for all groups), recovered more than half the loss in less than two weeks, chiefly because of bulky buying operations directed to petroleum shares (with Teikoku Oil shares in the lead). Rallies of other groups were comparatively smaller-scaled with primary metals up 3.09%, machinery up 2.59%, electric machines and tools up 2.53% and chemicals also up 2.53%. The "other manufacturing" group (woodsawing, printing, etc.) made a wider gain of 3.15% apparently because of its "depression-proof potentials. The real estate group recovered 3.25% as Mitsubishi real estate and Heiwa real estate were subject to heavy buying because of their "semi-speculative" charms. The service professions group was the lone loser (2.19% down).

Marking Time:—The adoption of a tight-money policy by the Bank of Japan was directly responsible for the collapse of share quotations in May. With the elevation of the official discount rate announced on May 8 as the curtain raiser, the Bank of Japan has taken various measures since to reinforce tight-money measures. These measures are likely to be supported by the Government with new steps aimed at restricting imports and promoting exports. The final goal of all the measures taken or about to be taken by the Government and the Bank of Japan is the improvement of the worsening balance of Japan's international payments. In other words, a new deflationary policy is about to be enforced. Whether the new policy may achieve its target remains to be seen, depending on future developments. Should the results prove not particularly encouraging, however, it is certain that the Government will further tighten the deflationary measures. With the future economic developments extremely uncertain for the time being, no tangible chances are likely to take place in the stock market for the time being, and traders will be forced to mark time for some time.

HOW *can you invest in 150 or more Japanese growing stocks for as little as $13.94 ???*

Through *Nikko's Investment Trust* of course!! A share of *Nikko's Investment Trust* represents an ownership interest in a broad cross-section of stocks and bonds so that adequate diversification is provided for both large and small investors.

Why not get the facts now!

Simply write or call - - - -

FOREIGN DEPARTMENT

The Nikko Securities Co., Ltd.

(*In the New Marunouchi Bldg., Right opposite Tokyo Central Station*)

Tel.: 27-1201, 1301, 1411

San Francisco Office: **Nikko Kasai Securities Co.**
2165 California Street, S.F., Calif., U.S.A.

Los Angeles Office: 258 E. 1st Street, Los Angeles, Calif., U.S.A.

New York Correspondents: **Bache & Co.**
36 Wall Street, New York 5, N.Y., U.S.A.

Economic Growth Rate

SINCE the upping of the Bank of Japan's official discount rate for commercial bills in May this year the curbs on credit have become increasingly restrictive, and on June 4 there was a sharp boost of the collateral rate for importation of non-essential items. Moreover, the Governor of the Bank of Japan made public a statement that depending on the future situation it might become necessary further to tighten the measures for regulation of credit; while Finance Minister Ikeda also pledged modifications, as the need arose, of the plans for procurement and spending of funds in connection with the fiscal loans and investments covered by the Budget for the current fiscal year. (Both statements made at Osaka before the National Bankers' Convention.)

It is believed that these actions were the direct outcome of the tendency in May toward an increase, despite the strictures imposed, in the amount of letters of credit opened for import purchases. The total volume of these letters of credit in May went well over the $300 million level to break all previous postwar records, so the planning by the Ministry of Finance and the Bank of Japan for further credit curbs is not without good reason.

Nevertheless, it cannot be denied that the more such restrictive measures become evident the greater will be the shock impinging on the world of business. The administering of strong medicine for too long almost invariably results in subsequent debility. But so long as the public continues to favor speculative import purchasing or to indicate a strong desire to engage in heavy investment, the drastic measures proposed by the powers that be may perhaps have to be accepted as a necessary evil. It will, of course, be necessary for the Government and the Bank of Japan to exercise every caution to avoid such overdosing and resultant enfeeblement as to necessitate later administering of restoratives and stimulants.

In order to achieve this end various actions will have to be resorted to. But we would urge in the first place the setting up of a reasonable target in connection with the economic growth rate of Japan. Once this is accomplished, a yardstick will be established for the shaping of fiscal credit, and industrial policies; and the fear will be removed of overextension or over-contraction. Furthermore, it will become possible to take the correct actions to straighten out distortions resulting from sudden shifts in the world situation.

Needless to say, it will be no easy matter to decide on what basis to use for arriving at what can be considered a normal, acceptable economic growth rate. For one thing, the growth rate of a given economy varies with natural conditions and the living standards that prevail; while even within a given economy the rate cannot be the same at all times. For instance, if the rate of increase of the real national income is taken to represent the economic growth rate, whereas the average figure for the thirteen more advanced nations in 1952 stood at 6.55 percent, the rate for sixteen under-developed countries was only 1.2 percent. In 1954, however, the average rate for the thirteen advanced nations declined to 1.19 percent.

Generally speaking, the nations sustaining heavy damage during the war, and therefore constrained to great reconstructive effort, have indicated higher postwar growth rates than the relatively unscathed countries. Also, it is normal for economies with low employment and a surplus of labor, or with high levels of education and technology, to indicate higher growth rates than those without these advantages.

Considering these factors, it should be no surprise that the economic growth rate of Japan continues to maintain a high level, as it did before the war. The real rate of gain of the gross national product, over that of the preceding year, was 11 percent in 1951. In 1952 there was a gain of 10.2 percent; and the subsequent yearly gains were: 11.4 percent in 1953, 3.5 percent in 1954, and 8.4 percent in 1955, the average for the five years ended with 1955 being 8.9 percent. This is indeed a high average, but the figure probably gives a true indication of the actual status of the Japanese economy.

The growth rate in 1956, at 12.6 percent, was perhaps abnormally high. Whereas the national income attributable to the primary industries (farming, forestry, aquatic products, &c.) rose by only 2.4 percent, there was an astonishing gain of 20 percent in the national income from mining and manufacturing. This industrial growth rate has no parallel elsewhere.

One reason for this abnormal growth in 1956 was the slowdown occurring in 1954 and 1955. In other words the high rate of 1956 can be considered as a reaction to the excessively low rate of 1954, which in turn was a reaction to the excessive growth which took place in 1951, 1953, and 1954, particularly 1953. However, it will be noted that the amplitude of the swing has become increasingly great.

If Japan is to take advantage of the experience gained during the past five or six years, it is obvious that care must be exercised not to precipitate such a recession as would cause the real growth rate of the national income to fall below the 8 percent level. In order to prevent unnecessary disruption and distress, such a policy goal should be adopted to govern future credit curbs and price regulation.

It goes without saying that such forestalling of economic stresses cannot be accomplished solely on the strength by Government and Bank of Japan actions. Wholehearted cooperation on the part of the general public must be forthcoming. Nevertheless, it is also a certainty that unless the Government takes the initiative satisfactory results will not be easily attained.

Whither Japan's Payments Position?

When the Ishibashi Government in January this year definitely committed itself to a policy of economic expansion through its budget proposal for fiscal 1957–58, the comment in some quarters was: "It's all very well to talk about 'positive' measures for growth, but we definitely don't want to be subjected to such disinflationary measures as were adopted since the autumn of 1953, simply because the international balance of payments worsens as a result of expansion."

Unexpected Outcome

Although it had been feared that perhaps the positive expansion policy might result in a deterioration of the payments position, it had never been imagined that overimportation would continue for so long to cause such a heavy drain on the foreign exchange reserves. Consequently the shock felt by banking and business circles has been of no little magnitude.

The international balance of payments, of course, is dependent on two factors, the balance of visible trade and the balance of invisible transactions. In the case of Japan, visible trade has almost always resulted in deficits, which were usually covered by the surplus in earnings from invisible trade, to make the overall balance come out even or in our favor. Consequently, so long as there is an assurance that the invisible trade balance will be sufficiently favorable there would be no excessive apprehension about the overbought position for visible trade.

However, the current situation does not permit much hope in this respect. For the "special procurements" (U.S. Government offshore procurement and dollar spendings by the United States Security Forces and personnel), which in fiscal 1956–57, amounted to 70 percent of the invisible trade earnings, are not expected, in fiscal 1957–58 to come anywhere near the $600 million needed ($587 million, in 1956–57), despite buying in Japan stimulated by ICA and other United States grants in aid. Payments of ocean freight charges probably cannot be reduced enough to contribute appreciably toward betterment of the balance of payments. Incidentally, in fiscal 1956–57 payments for freight at $166 million were only $30 million more than in the preceding year despite upward revisions of freight rates and increase in the volume of imports.

Consequently, the core of the problem must be sought in the area of visible trade. Although the Government set its export target for fiscal 1957–58 at $2,800 million, the performance to date has been such that achievement appears quite possible. Export letters of credit received during the four months ended with April averaged $214 million per month, at some 18 percent more than in the corresponding period of 1956. Exports during the same four months, according to foreign exchange statistics, were higher than last year by 14 percent.

Trade in Fiscal 1957–58

Although it is difficult to say at this early stage how export trade will turn out this fiscal year, even a conservative estimate indicates that it may possibly go over $2,800 million. But under the conditions of recent months this high level of income will not suffice to keep Japan's international accounts in the black. Consequently, the problem now is how much extra can be earned; while one of the aims of the curbs on credit is, needless to say, precisely this point.

Looking back on what happened in fiscal 1953–54 and 1954–55, it will be recalled that the third series of credit curbs, enforced from about March 1954, resulted in a notable surge of export sales, and the outcome was a topping of the fiscal 1953–54 volume by some $350 million. This was because the emergency action repressed domestic demands to cause Japanese industry to seek markets abroad, while the decline of internal prices contributed toward a strengthening of competitive position. Nevertheless, it must not be forgotten that such factors as the high business activity of Western Europe and the easing of import restrictions by the £ sterling area nations were actually stronger than the internal measures enforced. The mismatch of domestic and overseas prosperity therefore served to accelerate the growth of export volume.

What then is the situation now? Although the business readjustment in the United States appears to have been a small one, the economy of Western Europe has lost the nerve it once manifested, while the Southeast Asia area is suffering from a shortage of foreign exchange. Consequently, the situation differs considerably from that of 1954. Furthermore, the expected process of internal readjustment will doubtless cause, albeit temporarily, some hesitation on the part of foreign customers to buy, waiting for prices to decline further, particularly in connection with textile goods.

Nevertheless, it would not be right to sink despondently into a mood of pessimism. The investment in plant and industrial equipment, undertaken since last year, particularly after the second half, was not done without any purpose in view. If events turn out to be such that new investment is curbed and consumer spending continues its sound trend the productive effort will inevitably be directed toward export sales. Naturally, some patience will be needed. One cannot expect any export drive to succeed in two or three months.

Adjustment of Inventories

Let us turn next to import purchasing, the real culprit behind the recent worsening of the balance of payments. Although for regulation of imports there are such direct controls as tariff rate hikes and exchange regulation, recourse to such methods without applying antiphlogistics to the internal economic swellings would merely entail the risk of boosting prices and causing inflation.

Consequently, the remedial action taken recently aims directly at tightening domestic credit in order to clamp down on internal demands, while simultaneously whittling down import credit (including foreign exchange loans). Nevertheless, doubt must be expressed in connection with the view that this will

result promptly in betterment of Japan's payments position.

True, upon the premise that the expanded import purchases which have been continuing since last year have caused overstocking of raw materials, this prompt recovery theory may be justifiable. For the curbing of credit would then manifest itself in the form of inventories adjustment so that replenishment of stockpiles with imported materials either eased off or steadied at a reasonable level. This reasoning would be all the more correct were, as some reports have it, the raw materials stockpiles augmented during fiscal 1956-57 by as much as $400 million to $500 million worth of supplies. If this were the case, the recent credit curb action would immediately result in a sharp decline in import purchases, and betterment of the balance of payments would then be no problem.

However, in the light of various tabulations made in recent months, it has become evident that the stockpiles have not grown to the extent surmised. For instance, according to an estimate made by the Economic Planning Board the raw material and fuel stockpiles gain in 1956-57 was in the order of $100 million, while the Ministry of International Trade and Industry reports that the increase in these inventories came to a level short of $220 million.

Naturally, much depends on the methods used for making these estimates, while doubt could be expressed as to the veracity of the inventory reports upon which the tabulations are based. But even allowing for understatements, it would be safe to assume that the growth of imported raw materials and fuel stockpiles in fiscal 1956-57 did not go very much above $250 million worth. Other sources indicate that the only industrial field definitely overstocked with imported materials was that of textiles.

Suppression of Investment Activity

In any event, the customs clearances of imported items in fiscal 1956-57 increased in value by some $1,000 million. Consequently, the fact that there was a gain of only $250 million in raw materials and fuel inventories is open to question. But this riddle is soon solved when the actual content of the import purchases of fiscal 1956-57 is closely examined.

According to the Economic Planning Board, import purchases of raw materials and fuel increased in fiscal 1956-57, over the preceding year, by some $800 million (44 percent). Yet industrial production (mining and manufacturing) increased by only 22 percent. This looks extremely queer; but only when it is assumed that industrial production and raw materials importation rise or fall proportionately with one another. This is not true, particularly when, as in fiscal 1956-57, production boosts are particularly notable in such segments of industry, as iron and steel or petroleum derivatives, that are largely dependent of overseas sources of raw materials supply. When this happens, the overall dependence on imported supplies becomes accentuated.

Another notable feature of the importation growth of fiscal 1956-57 was the heavy purchasing of iron and steel, non-ferrous metals, and petroleum derivatives. The volume of these primary products came to $240 million more than in fiscal 1955-56, and they were mainly for overcoming the shortages that had developed at home.

Needless to say, the heavy purchasing of both raw materials and primary products in fiscal 1956-57 was spurred on by the intensive spending on capital equipment. No wonder, then, that the current series of credit curbs lays special stress on rectification of the excesses committed to date in investment in plant and equipment.

In summing up, it may be helpful to review the overall balance of payments situation, bearing in mind the factors cited above. Judging from the letters of credit movements, it appears that for two or three months to come it will be difficult to avoid monthly deficits of from $40 million to $50 million. Even with some decline in imports in August and September, the result for the first six months of the current fiscal year will probably be a deficit of more than $200 million.

Assuming that subsequent declines in import volume turn out to be notable it will not be until yearend, or more probably early next year, that the payments position becomes stable, with surpluses to be counted upon for replenishment of the foreign exchange reserves.

JAPAN'S FOREIGN EXCHANGE HOLDINGS

(In million dollars)

	Dollars	Pounds	Open Accounts	Total
Sept., 1952	719	337	127	1,282
Dec., 1952	789	119	69	977
May, 1954	550	104	126	779
April, 1956	925	277	253	1,454
Dec., 1956	1,063	91	267	1,421
April, 1955	818	25	263	1,016

Source: Ministry of Finance.

National Income in 1956

THE national income of Japan in 1956 continued to show notable growth. But because investment in plant and inventories was up 60 percent over that of 1955, and this resulted in a surge in imports of producer goods, there was a sharp reduction of the favorable balance of international payments.

On May 27, last, the Economic Planning Board announced the national income in 1956 (calendar year) as having come to ¥7,427,000 million. This is 13.4 percent higher than the ¥6,548,000 million of 1955, and after correction for commodity price changes, the real national income is estimated to have risen 10.3 percent, while per capita, taking into account the increase in population, the gain was 9.2 percent over the figure for 1955.

Notable Increase in Manufacturing Income

The increase achieved in 1956 actually exceeds that of 1955, when a gain of 9.4 percent over 1954 was registered, the outcome mainly of the unprecedented harvest and booming export trade. In consequence, the real national income, which since 1950 had been indicating a strong tendency toward de-

1. ANALYSIS OF NATIONAL ECONOMY OF YEARS 1954, 1955 & 1956

(In ¥ billion)

Item	1934–1931 (A)	1954 (B)	1955 (C)	1956 (D)	Pattern (%) 1934–1936	Pattern (%) 1955	Pattern (%) 1956	Comparisons (%) C/B	Comparisons (%) D/C
1. Distributed National Income	14.4	5,984.4	6,548.0	7,427.2	86.2	83.1	83.5	109.4	113.4
Earned Income	5.6	2,982.5	3,206.6	3,680.9	(38.9)	(49.0)	(49.6)	107.5	114.8
Self-Employers' Income	4.5	2,299.7	2,544.5	2,692.0	(31.3)	(38.9)	(36.2)	110.6	105.8
Individual Rentals Income	1.3	73.3	81.9	94.4	(9.0)	(1.2)	(1.3)	111.7	115.3
Individual Interest Income	1.3	138.8	176.3	216.6	(9.0)	(2.7)	(2.9)	127.0	122.9
Corporate Income	1.3	533.2	573.0	792.2	(9.0)	(8.8)	(10.7)	107.5	138.3
Government & Public Enterprises Surpluses	0.4	54.9	67.3	61.1	(2.8)	(1.0)	(0.8)	122.6	90.8
Net Income from Overseas	0	(–) 24.5	(–) 26.7	(–) 29.8	(0)	(–)0.4)	(–)0.4)	—	—
DEDUCT-Government and Consumer Interest Burden	—	73.5	74.9	80.2	(—)	(1.2)	(1.1)	101.9	107.1
2. Adjustment Factors	2.6	1,232.1	1,383.3	1,522.0	15.6	17.6	17.1	112.0	110.0
ADD—Indirect Business Taxes	1.4	721.1	771.8	838.6	8.4	9.8	9.4	107.0	108.7
DEDUCT—Government Subsidies	0	28.1	8.8	7.6	0	0.1	0.1	31.3	86.4
ADD—Capital Depreciation	1.2	539.1	620.3	691.0	7.2	7.9	7.8	114.4	111.2
3. Errors and Omissions	(–)0.3	106.9	(–) 54.7	(–) 56.8	(–) 1.8	(–) 0.7	(–) 0.6	—	—
4. Total (cost of gross national product)	16.7	7,323.3	7,877.4	8,892.4	100.0	100.0	100.0	107.6	112.9
5. Individual Consumer Spending	11.0	4,611.8	4,888.0	5,280.5	65.9	62.1	59.4	106.0	108.0
6. Total Private Capital Formation (domestic)	2.6	1,243.8	1,252.5	1,932.3	15.6	15.9	21.7	100.7	154.3
Private Dwellings	0.2	132.5	138.8	165.2	(7.7)	(11.1)	(8.5)	104.8	119.0
Producers' Durable Equipment	1.7	797.3	746.4	1,168.9	(65.4)	(59.6)	(60.5)	93.6	156.1
Increase in Inventories	0.7	314.0	367.3	598.5	(26.9)	(29.3)	(31.0)	117.0	162.9
7. Current Overseas Surpluses	0	71.7	134.4	18.6	0	1.7	0.2	—	—
8. Government Purchases of Goods and Services	3.1	1,396.0	1,602.4	1,661.0	18.5	20.3	18.7	114.8	103.7
Central	1.9	692.8	819.5	864.4	(60.1)	(51.1)	(52.0)	118.3	105.5
Local	1.2	703.2	782.9	796.6	(39.9)	(48.9)	(48.0)	111.3	101.7
9. Total (gross national spending)	16.7	7,323.3	7,877.3	8,892.4	100.0	100.0	100.0	107.6	112.9
10. Nominal National Income	14.4	5,984.4	6,548.0	7,427.2	—	—	—	109.4	113.4
11. Composite Price Index	1.0	327.8	327.2	326.6	—	—	—	—	—
12. Real National Income	14.4	18.3	20.0	22.1	—	—	—	109.6	110.3
(index of above)	100.0	126.8	139.0	153.2	—	—	—	—	—
13. Real Per-Capita National Income	210	208	225	245	—	—	—	108.4	109.2
(index of above)	100.0	98.9	107.0	116.8	—	—	—	—	—
14. Primary Industries Income	2.9	1,315.5	1,466.3	1,501.7	19.8	22.4	20.2	111.5	102.4
Farming	2.4	995.2	1,150.5	1,160.9	16.7	17.6	15.6	115.6	100.9
Forestry	0.2	156.8	146.5	159.9	1.6	2.2	2.2	93.4	109.1
Marine Products	0.2	163.5	169.3	180.9	1.5	2.6	2.4	103.5	106.9
15. Secondary Industries	4.4	1,890.3	2,003.0	2,413.3	30.8	30.6	32.5	106.0	120.5
Mining	0.3	151.5	138.9	148.6	2.3	2.1	2.0	91.7	107.0
Building and Construction	0.5	293.9	311.7	340.7	3.2	4.8	4.6	106.1	109.3
Manufacturing	3.6	1,444.9	1,552.4	1,924.0	25.3	23.7	25.9	107.4	123.9
16. Tertiary Industries	7.1	2,803.1	3,105.3	3,542.0	49.4	47.4	47.7	110.8	114.1
Merchandising (wholesale & retail)	2.0	969.0	1,070.1	1,247.0	13.6	16.3	16.8	110.4	116.5
Financing, Insurance, Real Estate	1.5	295.5	324.5	377.2	10.4	5.0	5.1	109.8	116.2
Transportation, Communication & Other Utilities	1.5	532.1	584.8	672.6	10.4	8.9	9.1	109.9	115.0
Service Trades and Others	2.1	1,006.5	1,125.9	1,245.2	15.0	17.2	16.7	111.9	110.6
17. Subtotal (domestic national income)	14.4	6,008.9	6,574 6	7,457.0	100.0	100.4	100.4	109.4	113.4
18. Personal Income	13.5	5,676.0	6,206.1	6,879.9	103.0	100.0	100.0	109.3	110.8
Personal Taxes	0.5	417.4	403.7	433.5	3.7	6.5	6.3	96.7	107.4
19. Income Minus Taxes	13.0	5,258.6	5,802.4	6,446.4	96.3	93.5	93.7	110.3	111.0
Personal Consumer Spending	11.0	4,611.8	4,888.0	5,280.5	81.5	78.8	76.8	106.0	108.0
Net Overseas Remittances	—	(–) 10.5	(–) 11.2	(–) 12.4	—	(–) 0.2	(–) 0.2	—	—
20. Personal Savings	2.0	657.3	925.6	1,178.3	14.8	14.9	17.1	140.8	127.3

Notes: 1. Years are calendar years. 2. The parenthesized figures in the "pattern" column are percentages of the total of each numbered item.

Source: Economic Planning Board.

cline, took an upturn; and the growth rate jumped in 1955 to 9.64 percent from the 2.1 percent low of 1949. The growth rate curve shows a tendency toward leveling off, but countries with such a high rate as 10 percent for two years in succession are extremely rare in normal times.

Particularly notable is manufacturing with a 23.9% gain over 1955. Thus secondary industries jumped to 20.5 percent as against the 6.0 percent achieved in 1955. With wholesale and retail up 16.5 percent, and banking, insurance and real estate up 16.2 percent, the tertiary industries also averaged a gain of 14.1 percent. The primary group—farming, aquatic products, &c.—also made progress comparing well with that of 1955 despite the somewhat poorer rice crop, partly because the farm income boost due to the bumper crop of 1955 overlaps into the first quarter of 1956.

There was, as a result, some change in the pattern of income by industrial categories—primary, down to 20.2 percent of the total, as against 22.4 percent in 1955; secondary up to 32.5 percent (from 30.6 percent); and tertiary unchanged.

Turning next to the distribution of national income, earned income increased by 14.8 percent over the level of 1955, close on double the 7.5 percent rate of gain indicated in 1955. But own-employer income increased by only 5.8 percent, as against the 1955 gain of 10.6 percent, mainly because farm income, making up nearly one-half of this type of income, did not make much headway.

On the other hand, corporate income, reflecting high business activity, jumped 38.3 percent over the 1955 figure; and noteworthy is the fact that withheld corporate reserves increased by more than 60 percent over the 1955 total.

In consequence, the pattern of distributed national income also underwent a change, with corporate income growing to 10.7 percent of the total as compared to the 8.8 percent of 1955, while own-employer income dropped in relative position to 36.2 percent as against 38.9 percent.

Personal Spending

On the spending side, the gross national spending in 1956 came to ¥8,892,400 million, 12.9 percent more than the ¥7,877,300 million of 1955. This spending figure tends to be affected mainly by personal spending for consumer items, which makes up the biggest proportion of all spending. Personal spending, in turn, depends on personal income which in 1956 totaled ¥6,879,900 million, 10.8 percent more than in 1955. Deducting taxes, the disposable per-

sonal income came to ¥6,446,400 million, 11 percent more than in 1955. It would be natural therefore to expect a similar increase in personal spending; but because in actuality the gain was only 8 percent, as against the 1955 level (1956 personal spending, ¥5,280,500 million), the propensity to spend continued to decline (Cf. table 2). But when the 1956 increment of disposable personal income is looked into, it is found that marginal spending increased, as compared to 1955, while marginal saving decreased.

An analysis of the personal spending in 1956 indicates that the most notable gains were the 17.4 percent increase in spending for housing and the 10.9 percent increase in clothing outlays, while the amount going into food increased 4.7 percent.

Because spending did not increase at the same rate as personal income, there was a boost in saving. Savings, the difference between disposable personal income and personal spending, amounted to ¥1,178,300 million, exceeding the ¥1,000,000 million level for the first time, and showing a rate of gain of 27.3 percent (40.8 percent in 1955).

At the same time, government purchases of goods and services, amounting to ¥1,661,000 million, gained only 3.7 percent over the 1955 level which was 14.7 percent over that of 1954. This was because government capital formation declined as a result of diminution of farm produce stockpiles, and because local government spending did not increase appreciably.

High Investment-Generated Demands

On the other hand, private capital formation, including durable producer facilities such as machinery and equipment, inventories, and private dwellings, came to ¥1,932,300 million, 54.3 percent over the 1955 level, reflecting a notable surge in investment. Noteworthy was the jump in corporate inventories, a sensitive index of business activity. As against the ¥194,200 million level of 1955, inventories increased threefold to ¥598,500 million. Likewise, producers' durable facilities increased in value by 72.9 percent (¥962,600 million), and this was a major factor in private capital formation.

2. REAL NATIONAL INCOME (In ¥ billion)

Year	National Income	Against Previous Year (%)	Year	National Income	Against Previous Year (%)
1930	12.2	—	1944	15.4	95.7
1931	12.5	102.5	1945	—	—
1932	12.8	102.4	1946	8.2	—
1933	13.1	102.3	1947	8.7	106.0
1934	13.6	103.8	1948	10.2	116.7
1935	14.3	105.1	1949	11.8	115.6
1936	14.8	103.5	1950	13.9	118.3
1937	16.2	109.5	1951	15.2	109.3
1938	15.9	98.1	1952	16.6	109.2
1939	16.8	105.7	1953	17.9	107.8
1940	16.1	95.7	1954	18.3	102.2
1941	16.7	103.7	1955	20.0	109.3
1942	16.1	96.4	1956	22.1	110.5
1943	16.1	100.0			

Notes: Based on 1934–36. 1946–50 are fiscal years, rest is calendar year.

Source: *The Oriental Economist* for table 2, 3, 4 and 5.

3. PROPENSITY FOR EXPENDITURE & FOR SAVINGS

Year	Propensity for Expenditure	Propensity for Savings	Marginal Expenditure Propensity	Marginal Savings Propensity
1951	80.8	19.4	—	—
1952	81.9	18.4	87.4	13.3
1953	87.3	12.8	131.4	(-)30.0
1954	87.8	12.5	91.3	9.3
1955	84.2	16.0	50.8	49.3
1956	81.9	18.3	60.1	39.2

Notes: Expenditure Propensity=Personal Expenditure (C)÷Personal Income (Y), Savings Propensity=Personal Savings(S)÷(Y), Marginal Expenditure Propensity=(ΔC)÷(ΔY), Marginal Savings Propensity=(ΔS)÷(ΔY). Δ=increase or decrease over the previous years.

The current foreign exchange surplus, indicating the balance of international payments for goods and services, diminished sharply to ¥18,600 million, as against the ¥134,400 million of 1955, because whereas exports totaled ¥885,000 million, about the same as in 1955, imports came to ¥936,700 million, some 25 percent more than in 1955. This unfavorable balance of trade has become worse in 1957, and judging from the national income for fiscal 1956-57 (ended March 31, 1957) there is quite a possibility that the foreign exchange surplus will become a deficit.

Gross national spending in 1956 therefore changed in pattern considerably, as compared to 1955. Because of the notable increase in private capital formation, the proportion held by personal spending declined to 59.4 percent of the total, as against 62.1 percent in 1955, despite the gain of 8 percent in personal spending. Government purchases of goods and services dropped to 18.7 percent of the total, as against 20.3 percent in 1955, while the current foreign exchange surplus declined sharply to 0.2 percent of the total, as against 1.7 percent in 1955. On the other hand private capital formation gained notably to make up 21.7 percent of the gross national spending, as compared with the 15.9 percent of the preceding year.

4. GROSS NATIONAL EXPENDITURE (%)

	1934–36	1954	1955	1956
Personal Consumption Expenditure	65.4	15.8	0.1	18.7
Gross Private Domestic Capital Formation	63.0	17.0	1.0	19.0
Current Overseas Surplus	62.1	15.9	1.7	20.3
Government Purchases of Goods & Services	59.4	21.7	0.2	18.7

5. NATIONAL INCOME BY DISTRIBUTIVE SHARES (%)

	1934–36	1954	1955	1956
Compensation of Employees	38.9	49.9	49.0	49.6
Propriators' Income	31.3	38.4	38.9	36.2
Corporation Profits	8.7	8.9	8.8	10.7
Others	21.1	2.8	3.3	3.5

The growth of Japan's national income in 1956, as reviewed above, was certainly remarkable. But it must not be forgotten that despite this phenomenal growth rate the per-capita income level still remains at but one-ninth that of the United States and far below that of such countries as Britain, France and West Germany. Moreover, the growth rate immediately caused an unfavorable list in the balance of trade, which in turn has resulted in a series of measures to curb credit.

Japanese Industry in High Gears

THE riddle posed by the phenomenal growth of the Japanese economy in the face of irksome impediments thrown across its path, such as loss of stable markets and the worldwide trend toward protectionism and resort to tight controls over trade and foreign exchange, is explainable only by citing

such matters as the United States Government offshore procurement of goods and services and other dollar spendings (known generally as "special procurement"), the development of domestic resources, and the corresponding growth of the domestic market for both producer and consumer items. Particularly noteworthy is the fact that the huge investments channeled by the government to the heavy and chemical industries did much to raise the technological level of the industrial structure, not in isolated spots, but as an integrated, organic whole.

Improvement of the Industrial Structure

Reviewing the development of the manufacturing industries since the war, it is noted that as against the obstacles to further expansion which appear to be bothering the textiles industry, there has been a doubling or tripling of production in such categories as chemicals, metals, and machinery. (Cf. Table 1)

1. GROWTH OF MANUFACTURING INDUSTRIES
(1934-36=100)

Year	Food-stuffs	Tex-tiles	Print-ing	Chemi-cals	Rubber & Leather	Lum-ber & Wood Pro-ducts	Cera-mics	Metals	Machin-ery
1950	83.7	41.3	44.8	103.1	114.1	120.4	97.7	96.6	125.6
1951	104.7	58.0	55.4	140.7	129.4	157.1	136.6	144.0	197.1
1952	114.6	66.2	78.4	168.5	131.6	158.0	138.2	154.2	205.1
1953	161.7	76.5	106.5	216.6	172.1	169.8	156.0	182.5	266.5
1954	191.8	81.9	109.6	267.2	170.8	177.0	175.3	192.3	257.4
1955	206.7	85.9	125.1	318.4	177.5	184.7	174.8	218.7	249.7
1956	219.3	99.9	135.2	365.6	215.4	210.3	214.3	265.6	397.3

Source: Economic Planning Board.

This, manifestly, must be taken to indicate evolutionary advancement of the industrial structure. The development, naturally, has been reflected by the pattern of the items of overseas trade. In export, as against the sharp decline in relative importance of yarns and fabrics, notably silk, the proportions held by metals and metal products have increased, while recently the rise in importance of machinery, most notably ships, has been a salient feature.

With import trade, the relative importance of fibrous raw materials, such as raw cotton, has declined to be superseded by iron ore, steel scrap, petroleum, coal, and other materials and machinery for heavy manufacturing operations. (Cf. Tables 2 and 3)

It is to be noted, however, that the growth of export sales of metal products and machinery is due primarily not to achievement of competitive require-

2. PERCENTAGES OF MAJOR EXPORT ARTICLES

Items	1934-6	1950	1952	1954	1956
Total	100.0	100.0	100.0	100.0	100.0
Foods & Drinks	9.5	6.7	7.8	8.3	7.2
Fish & Shellfish	9.5	2.8	3.6	4.6	4.8
Tea	—	0.6	0.6	0.8	0.2
Textiles & Fibres	52.0	48.6	32.8	40.3	34.8
Raw Silk Yarn	11.1	4.7	3.4	2.9	1.7
Cotton Yarn	1.3	2.1	2.2	1.4	1.1
Cotton Textiles	16.5	24.8	14.2	15.5	10.7
Clothings	—	2.9	3.0	3.4	4.9
Chemicals & Pharmaceuticals	4.3	2.0	3.1	4.8	4.3
Ceramics & Cement	2.9	3.3	4.5	4.2	4.6
Cement	0.5	0.7	1.4	1.2	1.5
Ceramics	1.3	2.2	2.3	2.1	2.0
Metals & Metal Products	8.2	19.4	26.8	15.3	13.6
Iron & Steel	8.2	8.8	20.6	10.3	8.9
Non-ferrous Metals		7.1	3.3	2.6	2.0
Machinery	7.2	8.5	8.7	12.4	19.3
Textile Machinery	0.4	1.0	1.7	2.8	1.5
Sewing Machines	*	1.1	1.5	1.7	1.4
Ships	*	3.1	0.9	3.5	10.4
Others	15.9	11.5	16.3	14.6	16.2
Lumber	—	0.7	1.0	1.3	1.1
Toys	0.9	1.5	1.2	1.9	2.2

Source: Finance Ministry.
Notes: — unreported. * negligible.

3. PERCENTAGES OF MAJOR IMPORT ARTICLES

Items	1934-36	1950	1952	1954	1956
Total	100.0	100.0	100.0	100.0	100.0
Foods & Drinks	16.5	34.7	30.4	27.2	17.3
Rice	10.6	8.7	9.1	10.5	3.4
Wheat	1.2	15.2	7.7	7.0	5.1
Sugar	4.7	4.1	5.5	4.5	3.9
Textile Materials	31.8	38.7	30.1	26.6	24.7
Wool	5.9	6.1	6.2	6.1	6.9
Cotton	23.6	28.4	21.2	18.0	14.9
Flax, Hemp & Ramie	0.8	1.7	1.1	0.8	0.8
Metal Ores	—	1.9	7.2	7.1	14.1
Iron Ores	0.9	1.5	4.6	2.8	4.5
Scrap Iron	2.3	*	1.4	1.8	5.7
Non-metalic Minerals	—	2.4	3.5	3.5	3.0
Phosphate Ores	0.6	1.9	1.2	1.0	1.3
Salt	0.5	0.8	1.2	0.7	0.9
Mineral Fuels	4.9	5.5	11.5	11.1	12.8
Coal	1.7	1.1	4.1	2.6	2.8
Petroleum	3.2	4.2	7.0	8.4	9.7
Other Materials	—	7.0	6.8	8.7	11.1
Hides & Leathers	0.6	1.2	0.9	0.8	0.9
Soya-beans	2.2	2.5	1.1	2.8	2.6
Crude Rubber	1.8	4.2	2.3	1.6	2.3
Lumber	0	0.3	0.8	2.0	2.5
Chemicals, Pharmaceuticals	4.1	6.0	2.2	2.7	5.1
Machinery	4.7	0.7	4.5	7.4	5.0
Others	28.5	3.1	3.7	4.7	6.9

Source: Finance Ministry.
Notes: — unreported. * negligible.

ments, but to the rising world needs stimulated by widespread prosperity. Take for instance the growth in export volume of metals and metal products. The increase in steel sales was particularly notable in 1952 when the United States was plagued with strikes. In machinery, also, the sharp rise which took place in 1951 was the outcome of the Korean War. Moreover, the machinery category in the case of Japan, unlike for instance that of the United States or Germany whose main items are machine tools and electrical equipment, comprises, apart from ships, such things as sewing machines, light electrical appliances, textile machinery, optical goods, and other items that tend to be heavily affected by business cycles. This is typical of a marginal supplier of goods, and is therefore an important point to consider when planning for future export of machinery.

In shipbuilding, the Japanese shipyards began taking orders from foreign shipowners clamoring for supertanker since 1952, while with the establishment in 1953 of a subsidy system linked with sugar imports the industry was enabled to regain firm footing, develop superior technology and skills, and turn out high quality bottoms at competitive prices.

Be that as it may, and regardless of the reasons for the growth of export shipments of Japanese products, the activity has had definite effects on the internal economy, benefitting the export manufacturer and related industries. Machinery exports have resulted in expansion of machinery production, and steel sales abroad have likewise contributed immensely to build-up of iron and steel facilities. It is, after all, a generally accepted fact that the prosperity of recent years owes much to the growth of export trade; and it can be said that the essential character of the Japanese economy is changing to conform to the transformation taking place in the world economy. This naturally has resulted in drastic changes in the pattern of import-export items. Whereas before the war fibrous raw materials made up more than 30 percent of all imports, the decline in raw cotton requirements has reduced the percentage to only 25 percent. By contrast, there has been notable increases in purchases of steel scrap, iron ore and other metallic ores, and such energy sources as petroleum and coal. The high relative position held

by machinery imports is due to the requirements of such key industries as iron and steel, chemicals, machine tools, textile machinery, and cement. The faster the pace of Japan's industrial build-up in the heavy equipment and chemical fields, the higher will be the need for supply of superior and advanced machinery and equipment from abroad.

Growth of the Domestic Market

Most economists are in agreement that the basic and characteristic pattern of Japan's prewar economy featured on the one hand a limited domestic market, the result of low wages which, on the other, stimulated export to heighten dependence on trade. At the same time, the low wages permitted high savings, which in turn contributed to expansion of the market for producer items. This pattern, however, has undergone great changes since the war. Noteworthy is the proportionate increase in workers' wages, which is a decisive factor governing the size or growth of the consumer market; and it can be said that notable expansion has taken place. Although the defeat in war and the losses sustained brought the Japanese standard of living down to the starvation level, this resulted in a general equalization of income; so the pattern of personal income now bears no comparison to that of prewar days. Whereas before the war 39 percent of the distributed national income was earned by wage-earners, this proportion has jumped to from 46 to 48 percent. In vivid contrast is the decline of those obtaining income from property rentals and interest payments. (Cf. Table 4)

4. NATIONAL INCOME BY DISTRIBUTIVE SHARES (%)

Year	Compensation of Employees	Proprietor's Income	Personal Rental Income	Personal Interest Income	Corporate Profits	Others	Total
1934–36	38.9	21.3	9.1	9.1	8.7	2.9	100.0
1950	42.4	45.0	0.9	1.2	9.9	0.6	100.0
1951	42.5	42.5	0.9	1.2	12.0	0.9	
1952	46.1	43.0	0.5	1.5	8.7	(−)2.0	100.0
1953	46.7	40.3	1.1	1.8	10.3	(−)0.2	100.0
1954	48.2	40.0	1.2	2.3	9.0	(−)0.7	100.0
1955	47.6	40.4	1.2	2.7	8.7	(−)0.6	100.0

Source: National Income White Paper.

It can therefore be said that with the sharp diminution of high-income, low-consumption, monied groups, there has been a converse ascendancy of the low-income, high-consumption, wage-earner groups, making for equalization of income and a heightening of the propensity to spend on consumer items. The increase in consumer spending tends to intensify the exponential effect of investment, and this too appears to have boosted the growth of the internal market. Needless to say, with the stage set in this way the formation and consolidation of labor organizations did much to improve the social standing of the working class. Since the war, the workers' share of business profits rose to above the 40 percent level, as against the 30 percent of prewar. (Cf. Table 5)

5. EARNED WAGE PERCENTAGE AGAINST CORPORATE INCOME IN MANUFACTURING INDUSTRY

Year (Pre-war)	%	Year (Post-war)	%
1933	29.7	1949	51.7
1934	31.3	1950	46.6
1935	31.5	1951	39.7
1936	32.1	1952	42.4
1937	30.4	1953	39.4
1938	28.4	1954	39.2
1939	25.7	1955	37.7

Source: "Distribution of Income & Wage Structure in Japan" by Miyohei Shinohara for the years from 1933 through 1949; MITI for the rest.

Another factor contributing to intensification of the propensity to spend is the postwar increase in the income of the farmer, due for the most part to the farm land reform effected during the Allied Occupation.

In prewar days, the Japanese farmer was: 1) held to low rice prices by heavy importation of cheap foreign-grown rice; 2) made to pay extremely high tenant rentals (percentages of crop); and 3) forced to live at miserably low standards because much of the profit from crop sales went into fertilizer and other production supplies. Consequently, the rural areas as a whole were in a state of chronic poverty, and therefore constituted a marginal consumer's market. By contrast the postwar farmer 1) for the most part owns the land he tills, the result of the land reform, and his incentive to work is much higher; 2) he has at his disposal improved methods and techniques, including mechanical aids; 3) his staple crop prices are supported by the government, the sole purchaser of rice; and 4) the wartime and postwar food shortage has greatly raised his status. Consequently, the Japanese farmer has far greater income than before the war, and today 26 percent of the distributed national income is earned by the farmer, as against the prewar 20 percent.

According to the Economic Planning Board (Cf. Table 6), the real purchases of productive goods by farmers in 1954 came to more than double the prewar level, with the same jump in purchases of consumer items.

6. FARM AREA AS A DOMESTIC MARKET
(1934–36=100)

Year	Farmer's Expenditure for Producer's Goods: Expenditure Indices	Farmer's Expenditure for Producer's Goods: Percentage in National Expenditure	Farmer's Expenditure for Consumer Goods: Expenditure Indices	Farmer's Expenditure for Consumer Goods: Percentage in National Expenditure	Farmer's Overal Expenditure Indices	Farmer's Expenditure Percentage in National Expenditure
1934–36..	100.0	5.4	100.0	15.5	100.0	9.7
1952	165.6	5.7	167.7	22.7	140.7	11.5
1953	179.4	4.9	193.3	23.4	168.5	10.9
1954	208.4	5.3	187.1	21.6	176.2	10.7

Source: Economic White Paper.

Purchase of consumer goods by farmers increased considerably more than that of other segments of society since the war, so that today the farm population constitutes from 22 to 23 percent of the market for consumer items, as against the prewar 16 percent. As for the non-consumer item market, the relative importance of the farmer has not increased because of the notable gains made by non-farmers, but it cannot be denied that the scope of this market has expanded enormously. This fact is borne out by the high growth rate of the chemical industry, producing such typical chemical fertilizers as ammonium sulphate and urea.

Nevertheless, although land reform has resulted in a change of the pattern of Japanese farming, and has brought about improvements in production methods together with a growth of the market for both producer and consumer goods, it must be noted that under conditions of over-population these advances make for further segmentation and minusculization of farm operations.

High Rate of Capital Accumulation

When it becomes impracticable to utilize surplus capacity of old capital equipment for boosting pro-

duction, all increases in output must be undertaken by means of new investment. Moreover, with the pace of technological advances on the increase the role of investment as the key factor in economic growth becomes all the more outstanding. Postwar Japan has required a tremendous amount of investment. first to replace the facilities destroyed or damaged during the war, then to add to existing plant, and further to keep abreast of technological advances and developments, and the changes in the industrial and economic pattern. That the growth rate of the Japanese economy has been phenomenally high, compared with both world and prewar Japanese rates, is due mainly to high capital investment, or to an extremely high rate of capital accumulation. (Cf. Table 7)

7. CAPITAL ACCUMULATION RATES IN MAJOR COUNTRIES (%)

Year	Japan	U.S.	England	West Germany	France
1939	23.7	7.9	10.8	19.1	13.2
1950	24.9	18.0	11.5	20.5	20.0
1951	31.3	17.4	17.3	22.5	21.5
1952	26.6	14.4	13.9	25.6	19.5
1953	27.8	14.1	14.7	23.7	18.2
1954	24.4	13.4	14.5	24.4	17.7
1955	25.2	15.6	16.5	26.2	18.3

Source: Monthly Bulletin of Statistics, the United Nations.

How then was this high rate of capital accumulation achieved? This is a very important question upon which hinges the solution of the riddle of Japan's postwar recovery and growth. It is a recognized fact that a high rate of capital accumulation was achieved before the war by the direct method of low wages in conjunction with high corporate profits. What has been done since the war is somewhat different: the pattern has not necessarily been that of low wages and high corporate profit. Corporate earnings declined sharply as a result of "zaibatsu" dissolution, economic deconcentration, and loss of overseas monopoly markets. Moreover, the workers' share of profit increased as compared to prewar. How then was it possible to achieve a higher rate of capital accumulation than before the war? The answer is none other than heavy taxation, which made possible government investment and lending, together with the creation of an enormous amount of credit by the Bank of Japan. (Seen from another angle, it can be pointed out that prewar Japan has been freed of the enormous non-productive spending on defense, which before the war amounted to more than one-half of the national budget.) It will be seen from Table 8 that the postwar tax burden has been considerably heavier than before the war, while the number of taxpayers has gone up to some ten times prewar. In other words, the once distributed national income is re-absorbed in the form of taxes, and the suction rate is much higher than it ever was.

8. TAXATION RATES AGAINST NATIONAL INCOME

Year	National Taxes	National Taxes Plus Local Taxes
1934–36	8.5	12.9
1939	11.6	14.6
1941	13.8	16.2
1944	22.6	24.1
1948	22.8	26.8
1949	23.2	28.5
1950	17.0	22.6
1951	15.9	21.9
1952	16.2	22.2
1953	16.2	22.0
1954	15.3	21.3
1955	13.8	19.1

Source: 1957 Economic White Paper.

The money taken into the Treasury was then piped into key industries by such government investment and credit agencies as the Reconstruction Finance Bank and the Japan Development Bank. Another method of building up capital reserves was the enforced savings instituted when Bank of Japan credit extension gave rise to an inflationary spiral. Consequently, the key roles in Japan's postwar capital accumulation were played by the government and the Bank of Japan. (Cf. Table 8)

Reviewing the method of funds procurement by the key industries—coal, iron and steel, electric power, and marine transportation—it is noted that since 1951, all, with the exception of coal, have depended heavily on outside sources, mainly the Treasury. Shipping in particular, obtained about half of its financing in fiscal 1953-54, when investment in plant and facilities was at its peak, from government sources. (Cf. Table 9)

9. SOURCES OF CAPITAL FOR FACILITY EXPANSION BY INDUSTRIES (%)

	1951	1953	1955
Coal			
External Capital	18.1	22.8	2.0
Banking Loans	3.2	12.3	5.0
Government Loans	8.2	1·3	△11.3
Securities & Bonds	6.7	8.3	8.2
Internal Capital	81.9	72.2	98.0
Iron & Steel			
External Capital	43.1	53.5	36.1
Banking Loans	11.7	20.5	15.3
Government Loans	19.2	7.6	△16.3
Securities & Bonds	21.2	25.4	37.2
Internal Capital	56.9	46.5	63.9
Electric Power			
External Capital	77.2	81.8	62.1
Banking Loans	27.1	26.8	17.0
Government Loans	38.9	40.4	32.1
Securities & Bonds	11.1	14.6	13.0
Internal Capital	22.8	18.2	37.6
Shipping			
External Capital	81.6	91.8	22.9
Banking Loans	36.4	30.9	△22.6
Government Loans	39.4	47.7	25.7
Securities & Bonds	5.8	13.3	19.9
Internal Capital	18.4	8.2	77.1

Source: Industrial Bank of Japan.
Note: △ Redeemed.

Further, note should be made of the fact that role of the government, through investment in housing projects and public works, in gross national capital formation has been far bigger since the war than before (post war, 30 percent of the total; prewar, 20 percent or less). In other words, the government in addition to regulation business activity has gone ahead positively into guiding and leading the economic growth of the nation. Such enormous capital accumulation has done much to stimulate economic development to furnish an expanded market for producer items. Consequently, the importance of export trade has diminished somewhat in relation to the total market. (Cf. Table 10)

10. DOMESTIC INVESTMENT & EXPORTS
(In billion yen)

Year	Investment (A)	Exports (B)	A/B (%)
1934–36	3.2	3.2	100.0
1950	987.7	351.6	280.9
1951	1,635.4	697.4	234.5
1952	1,583.5	749.1	211.4
1953	1,928.2	741.9	260.0
1954	1,796 7	789.1	227.7
1955	2,005.7	897.9	223.4

Source: *The Oriental Economist.*

Before the war, the roles played by domestic investment and export trade as stimulants of business activity were about equal, with a slight edge going

to export trade. In postwar Japan, however, domestic investment now has twice or three times the influence of export trade. Nevertheless, this should not be taken to mean that with the advance of the pattern of industrialization there will be less dependence on foreign trade, especially export sales. This is because when reviewing the Japanese economy, the apparent progress made in one aspect is often offset by the drawbacks of another. The characteristic physiognomy is that of a nation basically deficient in key raw material resources; and because of this inherent defect raw materials must be imported to meet the requirements of the changing industrial structure, while in order to be able to purchase these raw materials an adequate level of export sales must be maintained at all times. When, with the progress of industrialization there is a return to world specialization and division of labor, it is conceivable that the volume of trade will undergo steady growth. It can, of course, be expected that technical progress will permit some overcoming of the raw materials deficiency, but in order to make that possible it will be necessary first to obtain the basic materials and equipment.

In recent months, there has been an astonishing amount of investment in plant and equipment by private enterprise—

Fiscal 1952–53	¥548,000 million
Fiscal 1953–54	719,000 million
Fiscal 1954–55	599,000 million
Fiscal 1955–56	628,000 million
Fiscal 1956–57	976,000 million
Fiscal 1957–58	1,081,000 million (estimated)

In order to deal with the effect of this investment on foreign trade it will be necessary to make the following analysis: If the investment in plant made in fiscal 1953–54 can be presumed to have effected the first complete postwar renovation of capital equipment, the cycle of investment now in progress can be considered to be an even bigger renovation effort in addition to which positive advances are being made into new fields such as petrochemicals and synthetic resins. If this analysis is not far off the mark, then it can be assumed that there will be increases in the importation of such key materials as iron ore, steel scrap, petroleum, coking coal, and phosphates which are not readily available at home. In other words, the more advanced the economy becomes, the more pronounced will become Japan's character as a marginal importer. (Cf. Table 11)

11. CONSUMPTION OF IMPORTED MATERIALS
(1955 first quarter=100)

Year	Manufacturing Industry Production Indices	Imported Material Cosumption Indices
1955: 1st Quarter	100	100
2nd ,,	107	106
3rd ,,	111	112
4th ,,	115	118
1956: 1st ,,	115	123
2nd ,,	129	142
3rd ,,	134	144

Source: MITI.

Future Problems

It can be said that following upon the astonishing progress achieved under the abnormal circumstances of the postwar era, Japan now stands at a crossroads. What then is the course that should be taken? Should Japan revert to export dumping on the strength of low wages? Certainly not. A return to the prewar pattern would merely mean a narrowing of the domestic market and an intensification of the contradictions and conflicts that now exist. Neither can we just pray and hope for a continuation of the present world prosperity and further liberalization of world trade. Consequently, the only alternative method would be to search out and remove the impediments that have been obstructing expansion of export trade, at the same time keeping intact the factors that have so far contributed to economic growth. In more concrete terms, for expansion of trade positive efforts should be directed to the Communist China and Southeast Asia markets, while for development of domestic markets, the policy of wider distribution of equalized income should be followed, and cost reduction should be attempted through investment for "rationalization" and modernization. Needless to say, this is but one of the more effective approaches: it is by no means the only possible solution of the problem.

A nation's economy grows through advancement of its structure and changes in its pattern of consumption. Its trade also must undergo corresponding changes of pattern. Of decisive importance of course is the induction of the new technology necessary for the evolutionary changes in structure, and the volitional direction of such changes. How then should the balance of payments be adequately maintained in keeping with the new structure and physiognomy of the Japanese economy? How should the Japanese economy be managed to achieve the desired ends? These are matters calling for careful study. Goods with which Japan could dominate world markets yesterday may today be no longer in demand, while the requirements of tomorrow may be something undreamt of at present. Typical of this cycle is the decline of silk and the advent of chemical fibers. With the silk industry barred from competition in world markets, Japan's chemical fibers industry has had to be developed, and the center of gravity of the economy has shifted from the light industries to the heavy. In consequence, the pattern of export items has shifted gradually to contain more and more products of the heavy and chemical industries. Was this not, however, in response to the changing pattern of the world economy? Was this not a case of Japanese products making inroads after, not before, the pattern of trade had become adjusted to the new structure of the world economy? Are not these the factors making for the instability of Japanese export trade? There is a basic difference between belated adjustment to the world situation and preparedness to meet anticipated changes of pattern, with perhaps some ability to influence these shifts. The first is the position of the marginal supplier, while the latter is that of nations capable of winning stable markets with goods of dependable quality. Which should be the choice of Japan needs no further elucidation.

Industry

Petroleum

Reserves Poor But Consumption Rising

With domestic reserves extremely poor, the development of oil fields in Japan has not yet made any tangible progress, while on the other hand 97% of the total oil needs has to be bought from abroad. After the end of the Second World War, the General Headquarters of the Supreme Commander for the Allied Powers once announced that Japan's probable crude oil reserve would amount to 14,000,000 kl., or only 0.01% of the world's total. As of December, 1956, her positive reserve was estimated at not more than 3,504,000 kl., or 10.2 times the crude oil output in that year (see Table 1). It follows that her reserve will be exhausted to nil 10 years hence.

1. JAPAN'S CRUDE OIL POSITIVE RESERVE AND PRODUCTION
(In kl.)

Prefecture	Positive Reserve (R) as of Dec., 1955	Production (P) in 1956	R/P (%)
Akita	2,444,000	277,880	8.8
Niigata	920,000	49,695	18.5
Yamagata	111,000	13,926	8.0
Others	29,000	3,313	8.8
Total	3,504,000	344,828	10.2

Source: All tables are compiled by *The Oriental Economist* on the basis of MITI statistics.

Nippon Oil Resources Development Co., a recently established semi-governmental corporation, has actively commenced an all-out development program, but owing to the lack of funds it will be long before any headway will be made in this field. With Japan Petroleum Trading Co. as a central organ, on the other hand, an ambitious plan is being pushed to tap oil fields in Saudi Arabia through cooperation between authorities concerned and business circles. It is to be noted that big oil consumers, such as electric power and steel firms, are asked to cast in their lots with this international project.

Japan's oil industry has been almost completely dependent on imports of crude oil and products thereof. It deserves special mention, however, that as all the oil companies have come to put emphasis on their refining business, more crude oil than products now is being imported. This circumstance can clearly be seen from Tables 2-4.

2. JAPAN'S CRUDE OIL IMPORTS BY SOURCE
(In kl.: figures in brackets denoting the percentages of the total)

Year	Middle East	Southeast Asia	North America	Others	Total	Up above prev. yr., (%)
1950	692,347 (44.9)	229,558 (14.9)	619,193 (40.2)	— (—)	1,541,098 (100.0)	6,319.1
1951	1,802,582 (63.4)	451,481 (15.9)	590,029 (20.7)	— (—)	2,844,092 (100.0)	84.5
1952	3,490,576 (78.7)	814,552 (18.4)	127,168 (2.9)	— (—)	4,432,296 (100.0)	55.8
1953	4,430,040 (77.1)	1,129,643 (19.5)	176,123 (3.2)	11,721 (0.2)	5,747,527 (100.0)	29.7
1954	5,724,029 (76.9)	1,464,369 (19.7)	149,627 (2.0)	102,392 (1.4)	7,440,417 (100.0)	29.6
1955	6,428,689 (75.2)	2,025,948 (23.7)	98,604 (1.1)	— (—)	8,553,241 (100.0)	15.0
1956	9,059,377 (79.2)	2,201,309 (19.2)	180,241 (1.6)	— (—)	11,440,927 (100.0)	33.8

3. JAPAN'S CRUDE OIL IMPORTS BY FOREIGN CURRENCY
(In kl.: figures in brackets denoting the percentages of the total)

Year	GARIOA*	Dollar	Sterling	Open Account	Without Draft	Total
1950	897,682 (58.2)	304,065 (19.8)	339,351 (22.0)	— (—)	— (—)	1,541,098 (100.0)
1951	195,411 (6.9)	1,991,964 (70.0)	656,717 (23.1)	— (—)	— (—)	2,844,092 (100.0)
1952	— (—)	3,279,715 (74.0)	1,152,581 (26.0)	— (—)	— (—)	4,432,296 (100.0)
1953	— (—)	4,232,014 (73.6)	1,466,768 (25.5)	48,745 (0.9)	— (—)	5,747,527 (100.0)
1954	— (—)	5,391,340 (72.5)	1,704,712 (22.9)	279,433 (3.7)	64,932 (0.9)	7,440,417 (100.0)
1955	— (—)	5,789,937 (67.7)	2,216,460 (22.9)	546,844 (6.4)	— (—)	8,553,241 (100.0)
1956	— (—)	6,362,206 (55.6)	4,645,457 (40.6)	438,264 (3.8)	— (—)	11,440,927 (100.0)

*Government Appropriation for Rehabilitation in Occupied Area.

Oil consumption has been curving up steeply since 1950 along with the expansion of national economy as shown in Table 5. Particularly remarkable has been the increase of heavy oil consumption probably because of the higher coal prices: in the past six years, consumption rose six times for this liquid fuel whereas it gained about six fold for the total of all oil products. This notwithstanding, per capita oil consumption in 1956 is estimated at not more than 0.9 brl./yr. compared with the United States' 20 brl./yr., the United Kingdom's 5.7 brl./yr., France's 4.8 brl./yr., West Germany's 2.2 brl./yr. and Italy's 2.1 brl./yr. This is ascribed to the overpredominance of the agrarian population and the lower economic and cultural standards in this country.

With heavy oil accounting for over 50% and gasoline nearly 30%, however, the pattern of oil

4. JAPAN'S OIL PRODUCTS IMPORTS
(In kl.)

Year	Gasoline	Kerosene	Light Oil	Heavy Oil	Lubricating Oil	Others	Total	Up (+) or Off (−) compared with Prev. Year
1950	67,336	7,835	182,742	537,838	47,948	3,461	847,160	(−) 59.3
1951	10,815	—	182,214	967,428	11,905	3,444	1,175,806	(+) 38.8
1952	133,720	1	30,396	831,624	26,409	2,225	1,024,375	(−) 12.9
1953	302,838	—	18,790	2,580,264	15,187	2,261	2,969,340	(+) 189.9
1954	391,373	29,958	88,733	2,407,550	41,767	1,426	2,960,807	(−) 0.3
1955	239,316	2,908	221,187	1,903,671	18,902	1,168	2,387,152	(−) 19.4
1956	109,253	—	93,937	1,647,261	35,616	2,705	1,888,772	(−) 20.9

5. JAPAN'S OIL PRODUCTS CONSUMPTION
(In kl.)

Year	Gasoline	Kerosene	Light Oil	Heavy Oil	Lubricating Oil	Others	Total	Up (+) or Off (-) compared with Prev. Year
1950	413,299	76,784	208,329	1,111,135	199,453	80,377	2,089,377	(+) 23.3
1951	745,996	134,174	350,238	1,836,825	246,816	89,404	3,404,453	(+) 62.9
1952	1,442,701	116,863	413,941	3,121,164	287,054	132,397	5,514,120	(+) 62.0
1953	1,984,778	351,374	560,976	5,069,494	348,566	168,563	8,483,751	(+) 53.9
1954	2,324,305	470,077	656,016	5,579,275	370,368	177,099	9,577,140	(+) 12.9
1955	2,558,513	519,371	784,993	5,726,938	413,105	206,072	10,208,992	(+) 6.6
1956	3,130,253	729,845	913,480	6,625,751	496,378	260,590	12,156,297	(+) 19.1

consumption is more or less similar to that in the European countries. This tendency will become all the more accentuated in the future as may be noted in Table 6. From 1955 through 1975, Japan's energy requirements will increase 2.4 times, according to a report submitted to the Minister of International Trade and Industry by the Council for Industrial Rationalization. The same report estimates that, with domestic resources quite limited for coal and water power, Japan's dependence on imported fuels, especially oil, will grow rapidly, and that her requirements in 1975 will be 4.5 times those in 1955 for all the oil products combined and 5.17 times for heavy oil alone (see Table 6).

6. JAPAN'S OIL NEEDS ESTIMATES FOR FISCAL 1965 AND 1975
(In 1,000 kl.)

Products	1955*	1965	1975
Gasoline	2,658	6,960	10,600
Jet Fuel Oil	78	760	1,470
Kerosene	554	1,140	1,760
Light Oil	953	2,600	3,850
Heavy Oil	5,816	13,200	29,670
Others	638	1,050	1,500
Total	10,687	25,710	48,850
Consumed by Oil Firms	502	1,330	2,060

*The figures under this column denote not estimates but actual results in this year.

Source: The Council for Industrial Rationalization of the Ministry of International Trade and Industry.

Refinery Expansion Stepped Up

It is little wonder that all the oil firms are hurrying up their expansion programs. As listed in Table 7, contrasted to the downward trend of oil products imports in the past years (see Table 4), local production has been registering a steeper upcurve than consumption as the policy of buying and refining at home more crude oil than ever has been pursued. The rate of production growth in the past six years stands at nearly 7 times, or a very rare case among the world countries.

In the same period, refining plants have been expanded vigorously. At the end of December, 1956, their capacity came at 367,200 brl./day (in terms of crude oil), or about 5 times that six years ago, as shown in Table 8. Operating at 66% capacity, these plants have a good deal of surplus capacity for greater output. But some companies are thinking of further expansion in anticipation of brisker demand, for it is necessary for them to modernize some of their obsolete equipment and to construct some subsidiary facilities. Company-by-company crude oil refining capacities as of April 30, 1957, together with equipment expansion projects now under construction or contemplation, are listed in Table 9.

8. JAPAN'S CRUDE OIL REFINING CAPACITY
(In brl./day)

Year-end	
1950	73,000
1951	104,100
1952	142,800
1953	150,300
1954	212,900
1955	282,500
1956	367,200

As for the capacity projects now under way, mention must be made of the qualitative aspects as well as the quantitative boost. The completion of solvent refining plants for superior lubricating oil was soon followed by the construction of reforming plants for high-grade gasoline. Works will be in full swing before long for catalytic cracking plants. For aircraft gasoline, alkylation plants have been built. Hydro-desulfurization plants too, will be undertaken in the near future.

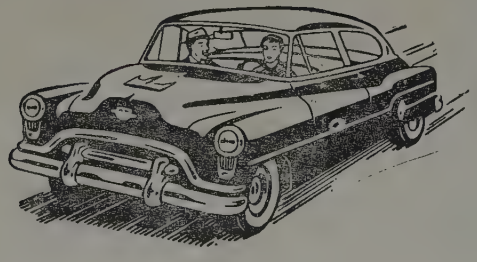
A new era of mushrooming development now dawns for the petro-chemical industry as a series of projects have been undertaken by oil refining interests themselves or in cooperation with chemical industrialists. One plan after another has been worked out to make methanol, ammonium sulphate, urea, etc. from natural gas, but more schemes mapped out to use as material gas by-product available from cracking and reforming plants. Some interests have started gas oil cracking.

7. JAPAN'S OIL PRODUCTS OUTPUT
(In kl.)

Year	Gasoline	Kerosene	Light Oil	Heavy Oil	Lubricating Oil	Others	Total	Up (+) or Off (-) compared with Prev. Year
1950	405,808	76,157	113,246	806,694	157,595	105,822	1,665,322	(+) 755.9
1951	797,148	124,286	307,014	1,254,417	307,863	129,590	3,020,318	(+) 81.4
1952	1,288,603	111,193	423,582	2,330,545	232,610	220,097	4,706,630	(+) 55.8
1953	1,707,110	358,768	496,977	2,894,765	316,898	293,909	6,068,427	(+) 28.9
1954	2,008,597	485,896	663,099	3,571,672	341,222	329,771	7,400,257	(+) 21.9
1955	2,461,481	592,170	737,213	4,081,103	365,514	376,417	8,613,898	(+) 16.4
1956	3,035,475	911,099	886,554	5,982,472	447,843	545,272	11,808,715	(+) 37.1

Distributor of Caltex Products

Processing and refining of petroleum and marketing of finished products.



NIPPON OIL COMPANY, LTD.

Head Office :
No. 4, 3-chome, Marunouchi: Tokyo

Cable Address :
"NIPPONOIL TOKYO"

9. CRUDE OIL REFINING CAPACITIES BY COMPANY
(In brl./day)

Company and Plant	April 30, 1957	Under Construction or Contemplation	Date Scheduled for Completion	Capacity After Completion
Nippon Oil				
Akita	4,000	—	—	4,000
Niigata	7,500	—	—	7,500
Kashiwazaki	1,500	—	—	1,500
Sub-total	13,000	—	—	13,000
Showa Oil				
Hirasawa	3,000	—	—	3,000
Niigata	11,000	—	—	11,000
Kawasaki	27,000	—	—	27,000
Yokkaichi	—	40,000	Oct., '57	40,000
Sub-total	41,000	40,000	—	81,000
Nippon Mining				
Funagawa	15,300	—	—	15,300
Nippon Oil Refining				
Yokohama	46,000	—	—	46,000
Kudamatsu	26,500	—	—	26,500
Muroran	8,300	—	—	8,300
Sub-total	80,800	—	—	80,800
Toa Nenryo Kogyo				
Shimizu	7,500	27,000	Dec., '57	34,500
Wakayama	48,000	—	—	48,000
Sub-total	55,500	27,000	—	82,500
Maruzen Oil				
Shimotsu	37,500	—	—	37,500
Matsuyama	10,000	—	—	10,000
Sub-total	47,500	—	—	47,500
Mitsubishi Oil				
Kawasaki	29,400	25,000	May, '57	54,400
Koa Oil				
Marifu	35,700	—	—	35,700
Daikyo Oil				
Yokkaichi	25,000	—	—	25,000
Asia Oil				
Yokohama	11,000	—	—	11,000
Toa Oil				
Kawasaki	6,000	6,000	July, '57	12,000
Taiyo Oil				
Kameoka	1,000	—	—	1,000
Idemitsu Kosan				
Tokuyama	35,000	—	—	35,000
Kita-Nippon Oil				
Hakodate	12,000	—	—	12,000
Grand Total	408,200	98,000	—	506,200

More Tanks and Tankers Wanted

Such concentration of expansion efforts upon refining plants has resulted in the deplorable delay in construction of subsidiary facilities, particularly tanks. The capacity of crude oil tanks increased to 1,600,000 kl. (an estimate) in 1956 from 750,000 kl. in 1950, but this has turned out to be far from sufficient to cope with the afore-mentioned boost of refining capacity. Thus, the ratio of tank capacity to crude oil supply has declined to only 1.6 months from about 4.8 months a few years ago. This means that tank capacity now stands at the very minimum. And a cry for stepping-up of crude oil tank constructions is getting louder than ever.

The situation is more critical for oil products tanks. At the close of 1955, oil products tanks at refineries are estimated to have trebled in capacity to 646,000 kl. from 203,000 kl. at the end of 1950, but the ratio of capacity against the average monthly supply dropped to only 0.9 from 1.6 months. As of December 31, 1955, tanks at oil depots had a capacity of not more than 1,670,000 kl., or off 1.4% from a year ago, this being attributed to the scrapping or reconstruction of some obsolete tanks.

Thus, there now is an extreme unbalance between tank capacity and growing supply and demand. And

nothing appears to be more essential than further construction of tanks. As for crude oil tanks, this is particularly urgent for local refiners to cope with the wild fluctuations of tanker freight and the increased use of bigger tankers. More oil products tanks, too, must be built so that refiners may be able to take effective counter-measures against the price ups and downs on the local market. It is to be recalled here, for instance, that the gasoline market suffered a sharp slump in the spring of 1955 as soon as their stocks began to pile up owing to the serious shortage of tank capacity.

Local oil refiners have another weakness, i.e. the delay in building of their own tankers. Only two or three firms have their own, and a very few. In the past years, the tankerage market has been firming up so that an increasing number of oil interests have strived, vying with one another, for construction of their own oil carriers. But no visible progress has yet been made in this direction for two reasons: namely, 1) on account of the various financing restrictions, the refiners busily occupied with the plant expansion projcets have been unable to appropriate necessary funds for tanker building, and 2) it is legally disallowed for any oil firms with foreigners among its managers to build and own seaworthy vessels. In fact, however, it is possible for them to establish their subsidiary shipping concerns and to have them operate tankers. Mitsubishi Oil, for example, has set up Hishiyu Tanker Co., which has started organizing its tanker fleet. Other oil firms will follow suit in all likelihood. Incidentally, oil firms financed by alien capital are listed in Table 10.

10. JAPANESE OIL COMPANIES FINANCED BY FOREIGN INTERESTS

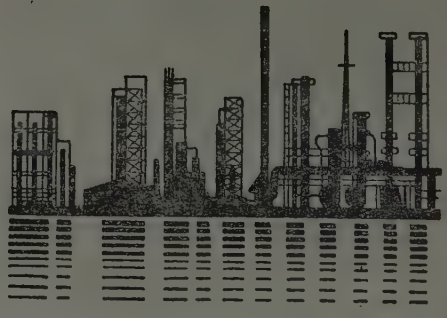
Japanese Oil Company	Foreign Interests	Percentage of Foreign Investments	Company Assigned for Products Sales
Toa Nenryo Kogyo	Standard Vacuum Oil	55	Standard Vacuum Oil (Japan Branch)
Nippon Oil Refining	California-Texas Corp.	50	Caltex Oil (Japan)—Nippon Oil
Koa Oil	Caltex Oil Products	50	Caltex Oil (Japan)—Nippon Oil
Mitsubishi Oil....	Tidewater Oil	50	Mitsubishi Oil
Showa Oil.....	Anglo-Saxon Petroleum	50	Showa Oil & Shell Co. (Japan)*

*One half of crude oil imports from Shell to be refined on consignment by Showa Oil and products available to be marketed by Shell Co. (Japan). The other half to be refined and sold by Showa Oil itself.

It is also to be mentioned that many oil firms now find it hardly possible to expand their existing plants as almost no surplus area is left for new construction in most cases. In order to boost their capacity, therefore, they must needs construct new plants at new locations. Toa Nenryo Kogyo and General Bussan have started construction works at a reclaimed area in Kawasaki City; Maruzen Oil at Goi, Chiba Prefecture; and Nippon Oil Refining (a subsidiary of Nippon Oil) at Negishi, Yokohama City. Mitsubishi Oil is searching for a suitable place on the Inland Sea coasts. By the way, it is also imperative for local refiners to improve harbor facilities along with the increasing construction of super-

TONEN

OIL STANDARD-VACUUM REFINERY



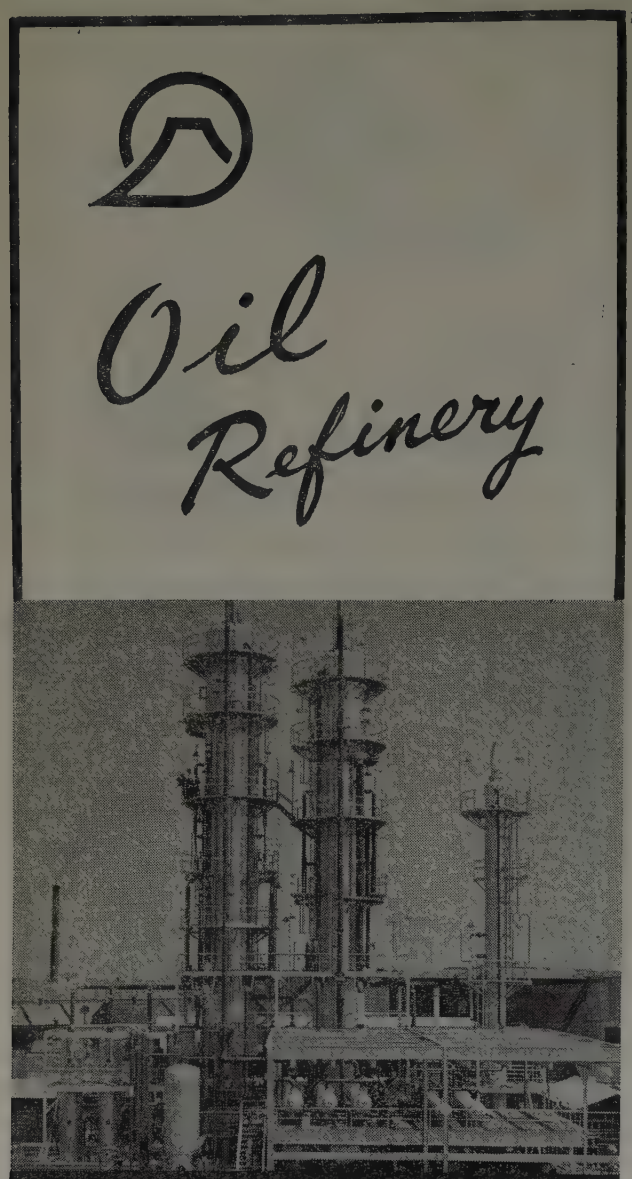
TOA NENRYO KOGYO CO., LTD.

Chairman, Board of Directors: J. D. DAVIS

President: N. NAKAHARA

Head Office:
No. 3, 1-chome, Ote-machi, Chiyoda-ku, Tokyo

Cable Address:
"TONEN TOKYO"



SHOWA
OIL CO., LTD.

President: K. Hayama

Vice-President: I. W. H. Sitwell

Head Office:
Tokyo Bldg., Marunouchi, Tokyo

Cable Address:
"SHOWAOIL TOKYO"

tankers.

Prospects Brighter for Oil Industry

As local refining companies are operating a very few tankers of their own, their business conditions fluctuate wildly, depending on the frequent ups and downs of tankerage. For all this, they are reaping bigger profits and paying more dividends than most interests are in other fields. All of them have been boosting their capital successively as their business has been flourishing steadily. So their shares are enjoying wide popularity on the stock market.

In the local business world, therefore, the oil industry is apparently being given more attention than ever before. Some big oil consumers have launched upon inroads into this lucrative line. Taiyo Fisher and Nippon Kotsu (a subsidiary of Tokyo Electric Express Railway engaged in auto service) jointly have established Asia Oil Co., and the former on its own account has set up Kita-Nippon Oil Co. In the fall of 1956, Toa Oil shares were actively bought on the stock market with the consequence that Tokyo Electric Express Railway has come to hold more than one-third of the total shares. This move was probably designed to secure smooth oil supplies for all the subsidiaries of Tokyo Electric Express Railway. At that time, a similar cornering scheme was plotted also against Daikyo Oil shares, but it has not proceeded to the extent that the company might be controlled by new shareholders. At any rate, it is of great interest that influential interests in other fields have tried to put under their wings minor oil firms financed neither by foreign interests nor by big local magnates.

In the first half-year term of 1956, profits tangibly shrank for all the oil companies, as listed in Table 11, due to the sharp rise of tanker freight toward the end of 1955 plus the abrupt fall of gasoline quotations. But conditions turned for the better in the

11. BUSINESS RESULTS OF LEADING OIL COMPANIES

(In ¥1,000,000 for sales and profit and in % for dividend; figures in brackets under each company title denoting authorized capital in terms of ¥1,000,000)

Company (capital in brackets)	Business Term	Sales	Profit	Dividend
Teikoku Oil	Apr.–Sept., 1956	1,886	259	12
(2,000)	Oct., '56–Mar., '57	1,875	267	12
Nippon Oil	Apr.–Sept., 1956	28,302	847	15
(4,500)	Oct., '56–Mar., '57	36,242	1,315	15
Toa Nenryo Kogyo..	Jan.–June, 1956	11,208	1,773	25
(4,748.5)	July–Dec., 1956	12,727	* 996	** 55.6
Maruzen Oil	Apr.–Sept., 1956	12,435	675	20
(2,625)	Oct., '56–Mar., '57	16,483	807	20
Showa Oil.....	Apr.–Sept., 1956	8,117	481	20
(2,550)	Oct., '56–Mar., '57	9,782	846	20
Mitsubishi Oil	Apr.–Sept., 1956	9,688	751	20
(2,400)	Oct., '56–Mar., '57	13,033	1,097	20
Daikyo Oil	Dec., '55–May, '56	5,851	678	28
(2,000)	June–Nov., 1956	6,117	412	28
Koa Oil	Apr.–Sept., 1956	3,925	505	20
(1,320)	Oct., '56–Mar., '57	4,997	633	***22
Toa Oil	Dec., '55–May, '56	2,215	166	20
(1,500)	June–Nov., 1956	1,936	106	12

*After the special depreciation of ¥800,000,000.
**Including the stock dividend.
***Including the stock dividend of 10%.

Note: This table is compiled by *The Oriental Economist* on the basis of reports announced by these companies.

following term as the market gradually picked up for gasoline and other products. With the tanker freight getting stabilized and the oil market expected to firm up, 1957 prospects look brighter. And the oil firms certainly will enjoy bigger profits.

As imports have been growing rapidly, Japan's international payment position has worsened to the extent that a new era of business adjustment will be ushered in, first of all, through financing restrictions. But there is no fear that a drastic cut will be made in the foreign exchange allocation for crude oil purchases, for oil now is one of the most important energy sources for Japanese industry. The oil industry may see its growth rate get stagnant for some time, depending on the turn of general business conditions, but it will continue growing steadily in the long perspective. General outlook, therefore, looms brighter for the industry than for many other lines.

Teikoku Oil

This is the largest petroleum mining company in Japan, practically monopolizing crude oil production. It was incorporated as a "national policy" organ in 1941, taking over the oil fields and subsidiary facilities of all the local oil companies. With the end of World War II, it was reorganized into a non-governmental firm with Mr. Yoshisuke Aikawa, one of the big shareholders, in the President's seat to reshuffle its managerial lineup and thereby to put the company on the right track. Thus, two drastic measures have been carried out: namely, 1) to transfer all the prospecting areas with their personnel to the recently established Nippon Oil Resources Development Co., on the one hand, and, on the other, to undertake less risky development and extraction projects in the oil and natural gas fields now under operation, and 2) to place particular emphasis on the development of natural gas, taking advantage of bright prospects for petrochemistry.

In the Niigata area, the company has established a subsidiary, Toyo Gas Chemical Industry, in cooperation with Toyo Koatsu Industries. The subsidiary will start making ammonium sulphate and urea toward the end of 1957. In the Akita district, another daughter firm, Akita Petrochemical, has been established through collaboration with Sumitomo Chemical, and it will start methanol production next spring. Both of these will commence sooner or later making petrochemicals from crude oil as well. In addition, purchase offers are coming briskly for natural gas from various chemical interests. Thus, business conditions are expected to turn definitely for the better in the field of natural gas.

There is another encouraging factor, i.e. the successful prospecting in the Oguchi oil field, Niigata Prefecture. Output available therefrom is expected to exceed even that from the Yabase field, Akita Prefecture, or thus far the richest oil field in Japan.

Such being the circumstances, it is generally expected that the company will boost its capital before

Mitsubishi Oil Co., Ltd.

President: Shun-ichi Takeuchi
Vice-President: I. E. Chapman
Capital: ¥2,400 Million
(Inc. with the Tide Water Associated Oil Co., U.S.A.)

Oil Refining, Selling of Oil Products, and Importing of Crude Oil, Gas Oil, Fuel Oil, Lubricating Oil (Tycol, Veedol, Tydol)

Head Office:
No. 1, Kotohira-cho, Shiba, Minato-ku, Tokyo
Tel: (50) 2411, 2421, 2431

Kawasaki Refinery:
No. 16, Ogi-machi, Kawasaki-City

Branches:
Sapporo, Sendai, Tokyo, Nagoya, Osaka, Fukuoka.

long, and its shares are enjoying a sharp rise on the stock market. It is also to be noted that the company has succeeded in regenerating the superannuated fields by a hydraulic fracturing method, and that it has been concentrating research efforts on a *in situ* combustion method and other effective measures.

Nippon Oil

Though it was the oldest firm in this line, with the termination of World War II this company entered into a tieup with California-Texas Corporation in setting up a joint enterprise, Nippon Oil Refining (capitalized at ¥4,000 million, equally divided between the two). Having handed over three on the Pacific coasts of its refineries to Nippon Oil Refining, it now is operating three small-scale refining plants on the Sea of Japan coasts and engaged as main business in sales of oil products, which are supplied from its own refineries, Nippon Oil Refining and Koa Oil explained elsewhere. Products of the latter two firms are sold by wholesale to this firm by Caltex Oil Co. (Japan), which holds 50% interests in these companies (see Table 10).

Much interested in petrochemistry, the company has founded another subsidiary called Nippon Petrochemical Co., which is provided with by-product gas from the Yokohama Plant of Nippon Oil Refining. The first-stage construction works for making isopropanol, acetone, propylene, etc. were completed in May, 1957, and the second-stage plan will soon be put into practice for production of ethylene, propylene and butylene derivatives. The total fund necessary for these works is roughly estimated at about ¥6,000 million, most of which will have to be raised somehow or other by the mother firm. Thus, Nippon Oil is expected to boost its capital in rapid succession next year.

In the spring of 1956, the company suffered a serious blow due to the sharp fall of gasoline quotations, for it had long been engaged mainly in less profitable oil products marketing. In the business term closing with September, 1956, therefore, it cut off the dividend rate from 20% to 15% per annum. As the gasoline market soon rallied, profit conditions gradually improved so that the company could have a good deal of surplus after the 15% dividend. In May, 1958, the company will celebrate the 70th anniversary of its founding and pay a memorial dividend of 5% or so. After that, it is expected to increase its capital. And it will try hard to keep the dividend rate stabilized at 15%.

Prospects for this firm are much dependent upon the expansion programs of Nippon Oil Refining, which has completed its Muroran Refinery, Hokkaido, and will start construction works at Negishi (reclaimed land), Yokohama.

Toa Nenryo Kogyo

Prior to the war, this firm was established, in compliance with the Army's request, for production of high grade gasoline and lubricating oils for military use through cooperation of all the local oil interests. After the war, it signed a tieup contract with Standard Vacuum Oil Co., which holds 55% of its shares.

Specializing in refining business, the company is offering all its products to the sole agent, Standard Vacuum Oil (Japan branch). The producer's price is to be calculated on the basis of the international quotation plus freight to Japanese ports (i.e. the company rate of the Standard group) and in consideration of the local market conditions. So it is little affected by the fluctuations of the tanker market or by such local factors as the slump of gasoline prices seen in the spring of 1956. Thus, the company is in a position to enjoy stabilized profits and to devote all its business efforts to refining enterprise.

The company now operates two plants at Shimizu and Wakayama. Most favorably located among the refineries in Japan (for instance, two 40,000-ton tankers can be moored at the same time), the Wakayama Refinery is the biggest in both capacity and production in this country. The company itself ranks first in oil production. Not only in scale but in technique as well, the Refinery exceeds all other plants. A fluid catalytic cracking unit with the capacity of 10,000 brl./day was completed toward the end of 1956, and an alkylation unit, the first of this kind in Japan, in the spring of 1957 for monopolistic production of higher grade aviation gasoline. Besides, a hydroformer unit has also been built for high grade gasoline. This is claimed to be the first plant of this sort in Japan and the second one even in the world.

Expansion works now are under way also at the Shimizu Refinery and will be finished toward the year-end. Though far smaller than the Wakayama Refinery, it will be expanded four times in capacity after the completion of the construction works. Another reforming (powerformer) unit will be built there next year.

The company is scheming to construct a gigantic refinery with the daily capacity of 50,000 brl. at a reclaimed land in Kawasaki. For this purpose, it is expected to double its capital, on the one hand, and, on the other, to reduce the dividend rate from 25% to 20%.

Showa Oil

It was in time of war that this company was created through the merger of three local oil interests —Hayama, Niitsu and Asahi. After the war, it invited foreign capital (50% of the total shares) from Shell interests. Crude oil is imported solely from Shell and refined on consignment, and the products available are marketed by Shell Co. (Japan), which is a successor to the prewar Rising Sun Petroleum Co.

The company is chartering most of its tankers from Shell and this at the company rate far lower than the international standard. This naturally turns out to be a very favorable factor, particularly when the freight market zooms, as may be noted in the increased profit in the business term ending with

March, 1957 (see Table 11). In spite of the Suez Canal dispute, the Shell group appears to have provided this firm with sufficient tanker bottoms.

At the Kawasaki Refinery or the largest of its three plants, there is no surplus area for new expansion. Thus, the company made a vigorous campaign to buy the former naval fuel depot at Tokuyama but was finally obliged to give up this plan, though it had bought part of the fuel depot, because Idemitsu Kosan got its application authorized at the last moment. In compliance with the advice of the authorities concerned, it changed its expansion program and has leased the former Yokkaichi Naval Fuel Depot, where a 40,000 brl./day refinery will be constructed step by step from the end of the current year to the spring of 1958. Shell will offer most of the ¥15-billion fund necessary for this project.

From the failure of the Tokuyama expansion program to the completion of the Yokkaichi Refinery, the company has been, and will remain, rather inactive compared with other oil interests. But its activities will be bolstered when the Yokkaichi Refinery is put into full swing, say two years hence. It is to be noted here that by-product gas available from this refinery will be provided to Mitsubishi Yuka's Yokkaichi Plant.

As the company has some land at Tokuyama, it may be expected to work out a plan for another refinery there sooner or later. It can look forward to every possible aid from Shell, which has been rather slow in advancing into the Japanese market but now appears determined to consolidate its position here. There is every possibility that the company will increase its capital some time in 1958.

Mitsubishi Oil

This is the only oil firm financed by foreign capital since prewar years, with its shares equally divided between Mitsubishi and Tidewater Oil Co. The company is freely marketing its products because the American investing concern is not much interested in overseas sales business. This is again the salient feature of this firm whereas all other foreign-backed firms specialize in refining and offer their products to the foreign investors with wide sales services throughout the country.

The company now is operating the only refinery at Kawasaki, where there is no surplus area for new construction. Thus, it is searching for a suitable location for a new refinery somewhere on the Inland Sea coasts. It is reported that an inspection group has been sent to Takehara, Hiroshima Prefecture. The company will announce to boost its capital as soon as a definite plan is worked out for expansion.

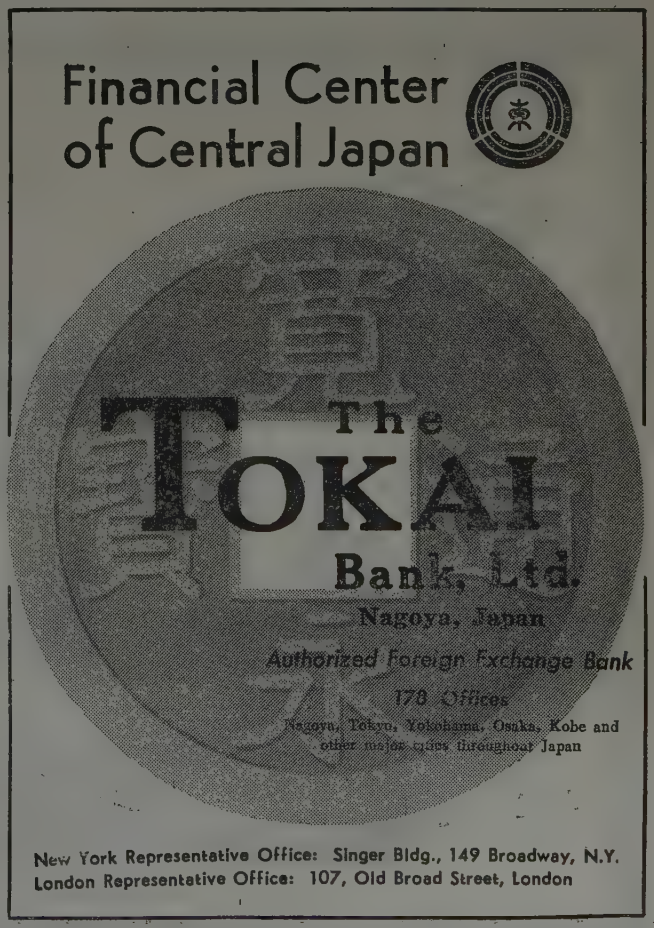
Backed by Mitsubishi interests, the company has been pursuing a very sound management policy. Its present expansion program covers a catalytic hydrodesulfurization and a desalting unit, which will be completed within the current year, and a petrochemical plant (making benzene and other aromatics), which will be put into operation next year.

In order to operate its own tankers, the company has recently founded a ¥50,000,000 subsidiary, Hishiyu Tanker, which will build a 30,000-ton tanker. As it has been given a free hand by Tidewater Oil, it is purchasing crude oil from any source in the Middle East and other areas where crude oil can be bought at cheaper prices. In this respect, be it noted, there is well-coordinated collaboration between this firm and Mitsubishi Shoji K.K.

It will not be until the start of construction works for the second refinery that the company will make a notable move. It will accumulate as much internal reserves as possible for some time. Its dividend appears to have been stabilized at 20% per annum, and investors are looking forward to its capital boost.

Maruzen Oil

This is the biggest oil firm in Japan without any financial backing from foreign interests, but it is cooperating with Union Oil Co. (U.S.) in importing crude oil and products. It is free, however, to buy crude oil from various sources as the American company has no stake in the Middle East. Relations between the two firms are far less intimate than those existing between other firms and the investing foreign interests. On the occasion of the tender for oil products sponsored by the U.S. Forces in the Far East, the American firm is apparently offering something like a foothold for this company. For liaison and investigation, California Maruzen Co. has been



established in the U.S.

It deserves special mention that another overseas subsidiary, Panama Maruzen Co., has been created for construction and operation of tankers under the Panamanian flag. This move has been made as the company's application for an impact loan for building its second tanker has been rejected. The overseas subsidiary, it is expected, can easily get financial aid from foreign banks so that a tanker may be built as an export item at a Japanese shipyard with steel products provided at cheaper prices. Not only that, the tax is far lighter on Panamanian craft than on Japanese ships. This is indeed a well-calculated policy as pursued by many Greek shipowners. In this way, the company will operate two 30,000-ton tankers as Daikyo Oil is, which will bring about very favorable effects on its business conditions. This can be regarded also as a means of self-defense against the foreign-backed rivals falling back on the tanker fleets of the investing foreign interests.

The company has been pushing a positive policy for new enterprises. A petrochemical plant at the Shimotsu Refinery has been put into operation for production of butanol and other butylene derivatives. At the Matsuyama Refinery, an integral petrochemical program has been mapped out, and aromatics will first be made. In this field, the Sanwa Bank appears determined to extend every possible aid to this company and goes so far as to help it build up close relations with the chemical and textile firms which have had wide business connections with the bank.

In Eastern Japan, the company has had no plant, and it now is planning to construct a big refinery at Goi, Chiba Prefecture. Thus, it is expected to announce to boost its capital within the current year.

Daikyo Oil

This is another "native capital" firm without any foreign backing, financial or otherwise. Operating the Yokkaichi Refinery alone, it is a small-scale establishment founded on sound and effective management.

The company is quite free to import crude oil from any source whereever prices are lower. It has bought crude oil from Iran, Canada etc. Moreover, it is operating two tankers of its own, and it now plans to build the third one. Among the local oil refiners, it was the first to adopt the policy of operating its own tankers. And this has turned out a very encouraging factor as the freight market has firmed up.

In expanding the Yokkaichi Refinery, utmost efforts were first put on dewaxing and other units for lubricating oils. Recently, however, emphasis has gradually been placed on Houdry cracking and reforming units. A plan was once worked out for an alkylation unit for higher grade aviation gasoline, but it has been abandoned because Toa Nenryo Kogyo has taken the first move in this direction as already mentioned. Instead a scheme is under contemplation for petrochemicals. As the Yokkaichi

Refinery can be expanded by reclamation, the company now has no idea for construction in other locations.

Operating with relatively small capital, the company is reaping bigger profits and paying as high a dividend as 28%. Last fall, the company's shares were actively bought on the market just as in the case of Toa Oil stocks, but the company successfully re-purchased most of these shares so that it might prevent all-out control from outside. In order to counteract such maneuvers in the future, it boosted its capital to ¥2,000 million in June, 1957. Even after that, it will keep the dividend at 25% per annum.

Toa Oil

This is an old-established dealer in fuel oil, maintaining close relations with Nippon Oil. Though formally set up in 1924, it succeeded to the oldest oil dealer since the Meiji era. During the war, it once operated a refinery at Tsingtao, China, which however was handed over to the Japanese Navy just before the end of hostilities.

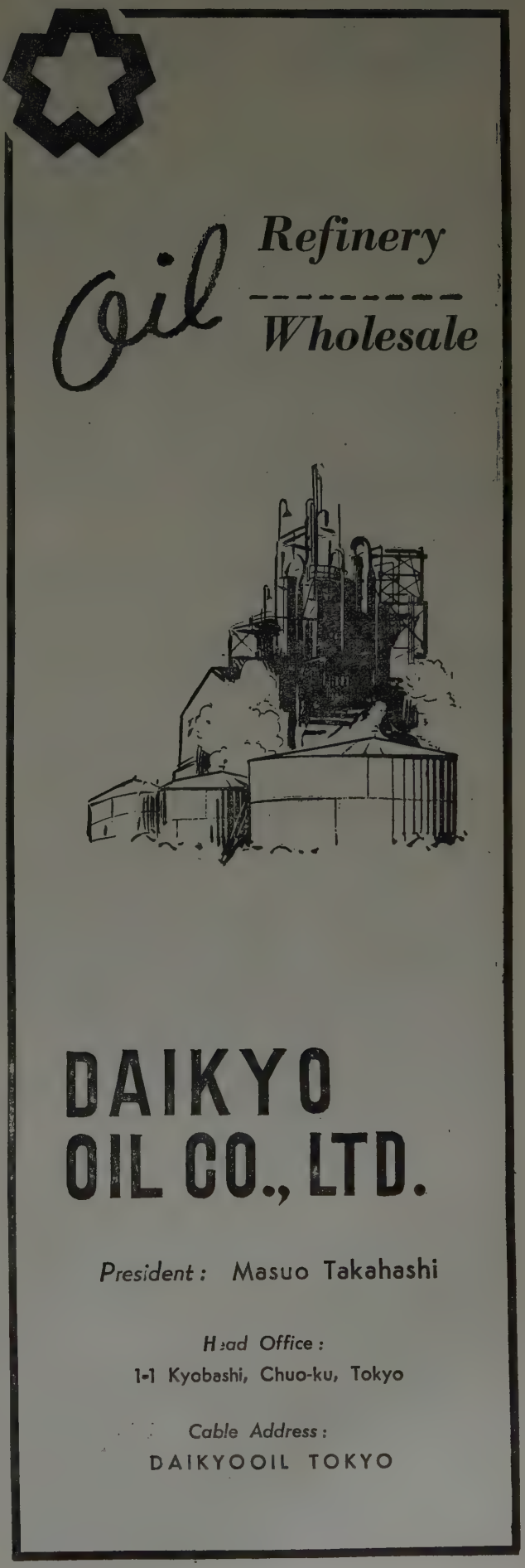
In 1955, the company finally advanced into refining business, opening its Kawasaki Refinery. Though small in scale, the plant will be expanded continuously.

Immediately after the war, it leased as a tank depot part of the former Yokkaichi Naval Fuel Depot. When Shell and Mitsubishi submitted a joint application for purchase of the Yokkaichi Naval Fuel Depot, the company took the initiative in opposing this foreign-backed program and proposed that the fuel depot should be reconstructed and operated under joint management of native capital. The controversial issue was brought to a solution when the fuel depot was sold to Showa Oil, a Shell affiliate. But Toa Oil retains its leased tank depot.

The Kawasaki Refinery doubled its crude throughput capacity to 12,000 brl./day from 6,000 brl./day. As part of the next expansion plan, a platformer unit will be built.

Probably because its capital was relatively small and there were no powerful interests among its shareholders, the company's shares were purchased actively in the fall of 1956. As the result, Tokyo Electric Express Railway came to hold more than one-third of its shares in the spring of 1957. Gifted with maneuvering ability, the president of the company has managed to prevent the despatch of directors from Tokyo Electric Express Railway though he has promised to maintain closer relations in the field of oil supplies. It still remains to be seen, however, what will become of the relationship between of the two companies.

When the share cornering issue was about to be over, the company hurriedly boosted its capital to ¥1,500 million. Owing to the abrupt fall of gasoline quotations and the soaring of tanker freight, it was obliged to cut off the dividend from 20% to 12% in the business term closing with November, 1956. As the market has recovered, it will again raise the dividend rate to 15%, it is said.



Nuclear Test Blasts Radiation Problem

By Yoshio Hiyama

As if in some infernal competition, the leading nations of the world have been undertaking test firings of the nuclear weapons they have developed. The result, naturally, of this progressive increase in the number of test firings is the global debate among the leading scientists of all nations as to the global contamination by nuclear fusion products whether radiation effects from which are negligible or dangerous upon the human population of the earth. Because of the debate, the political leaders of the world and the people of most nations appear to be confused by the conflicting views that have been made public. Consequently, the writer believes it will be of considerable interest to present an analysis of just what points are now considered as constituting matters of debate.

Injuries by A-Bombs

In so far as nuclear bombs are weapons specifically devised to be lethally destructive, any person within a certain distance of the blast will be either killed or injured by physical pressure, heat, or neutron induction, regardless of the manner in which the bomb is exploded. In addition to this direct effect on the human being, the "hot" or radio-active nuclear fission products explosions are scattered to irradiate the human body externally by adhering to clothing or the skin, while internal irradiation can occur through ingestion of contaminated water or food. Both external and internal irradiation result in injury in the same manner, proportionate to that radiation dosage, which is the same as those of exposure to radium or to X-rays. The epidermic injuries, if it is serious, are like burns, while when the radiation goes internally by its ionizing function, it destroys the materials of the internal cells of organs and result in disturbances of organic functions. The amount of destruction is proportional to the intensity and quality of the radiation and the duration of the exposure. And the molecules of the cell are supposed to be destroyed and they turn into useless or harmful matter to the cell. If it is more than the limit of the biological function of the cell, its ability to excrete or reproduce, then the cell dies. Even with the dosage held within limits of safety, the burden of the hazard creates an unhealthy physiological environment. The effects of radiation on cells of living organism are particularly prominent when the cell is at the stage of cell division, whether the somatic or the reproductive. Consequently, it has been determined that ionization radiation affects the genetics of plants and animals as well as human beings.

It is because of this nature of radiation that the X-ray and the gamma-ray are used for cancer therapy (to destroy the malignant cancer cells) and for mutational or selective improvement of plants and animals.

To date, it was reported that more than 180 test firings of nuclear bombs have occurred, some big, some small; some giving off large quantities of radio-active materials, others a little. It cannot be denied, however, that the nuclear fission products of these explosions carried by the wind and ocean currents have lodged themselves more or less in all the materials throughout the surface of world. In fact, these radio-active substances have already been discovered in detectable amounts in rain, the earth, in lakes, in the sea, in plants, in animals and in human beings.

Among these nuclear fission products are some that are intensively radio-active for a fraction of a second, a few seconds, a few minutes or a few days, but soon ceasing to give off radiations. While some others remain radio-active for years, for centuries, releasing radiations at a slower rate. Among the latter are strontium-90 (with a half-life of 28 years) and cesium-137 (37-year half life), both of which are generated in large quantities by nuclear fission. The strontium-90 enters into living organisms and behave close to calcium and lodges mostly in calcareous part such as bones and cells. Cesium-137 combines with potassium to be ingested and to lodge in the soft parts of the body.

Since the radio-active life of these fission products is long, it is the problem that with continued testing of nuclear weapons the amount released by each firing test would be accumulated to an amount to give a considerable radiation dosage to human body.

There are, of course, other matters of concern. When nuclear test blasts are continuously going on, the fission products of shorter life but higher radio-activity also tend to be present always in considerable amounts. And when these are inhaled or ingested, they adhere to the surfaces of the lungs or the digestive tract or are absorbed into the organs to irradiate these portions of the body until their activity decays or they are excreted. The irradiation of human beings and other living things by these short-life nuclides will cease as soon as nuclear bomb tests are suspended. But the radiation from such long-life nuclides as strontium-90 and cesium-137 will not diminish, but rather increase as the particles in the atmosphere settle on the surface. Further, since it is known that strontium-90, once lodged in the human bone structure, cannot be completely eliminated by excretion for more than ten years, it will be necessary to make the most careful investigation of the effects of such nuclides on mankind as a whole.

The release and scattering of radio-active substances vary widely, depending on the type of bomb and method of firing. When the fission-explosion is set off near the ground surface, soil, rock and other surface material are blasted into pulverized form to result in a heavy fall-out in the vicinity of the blast center. When the explosion takes place at high altitudes, the fission products of the blast are scattered high in the air. A portion of these is flung into the stratosphere to blanket the entire globe, while another portion goes into the troposphere to become windborne to adjacent areas.

In some cases, the nuclear bomb is the type to utilize the energy mainly by nuclear fusion. This type of nuclear weapon is a more recent development of the use of nuclear energy, and for the same amount of energy produced, the amount of fission products is lower than in the case of bomb of the type of nuclear fission; but here again the quantity of radio-active substances produced varies widely, depending on the construction of the weapon and the method of firing.

In any case, the contamination of areas in the immediate vicinity of the blast is fairly easy to control by proper monitoring. But the radio-active matter flung into the stratosphere is scattered, almost fairly uniformly, around the globe. Consequently, the fission product emanating from the radiation, through the stratospheric divergence impinge equally on all the surface of globe.

Consequently, the powers responsible for the nuclear bomb tests, and the nations interested in this matter have been conducting for several years incessant investigation and observations to measure the amount of radio-active precipitation, while analyses are being carried out on the amounts of radio-activity absorbed by the soil, water, food-stuff, animals and men. But these nations are not many. There probably are very few countries besides the United States, Britain, the U.S.S.R., Canada, Sweden, France, India and Japan that are actively undertaking such studies.

Furthermore, some of these countries, for some reason or other, have in some cases withheld from the public some of the data obtained.

In the case of Japan, ever since the unfortunate incident following upon the United States nuclear bomb test over Bikini Atoll in 1954, there has been conducted a continuing series of tests and observations. And since the results have been invariably made public, the attention of the world has come to be focused on the findings of Japanese scientists and observers.

Predicting the Future

Today, some scientists hold that no matter how much testing of nuclear bombs is carried out, the concentration of radio-active substances will never become high enough to endanger human life. Diametrically opposed are those who contend that the existing radio-activity is already dangerous. Let us look into the reasons for such disparity of views.

Judging from all data obtained to date by the writer, there is no great divergence in figures as to the amount of radio-active fall-out in dust and rain, it being generally agreed that fall-out is a little heavier in the northern hemisphere than in the southern, as most of the test firings were done in the northern hemisphere.

Also, as for the concentration of strontium-90 in food and human bone, the data obtained by numerous laboratories in the world is quite coincidental, although within the data furnished by Japanese scientists there is a wide variation, as its nature depends on the type of food and on the individual body. Really the range in the case of the former being from 1 to 10,000 times, and up to 50 times in the case of the latter.

As for any single type of food or in the case of the average for human bone concentration, the divergencies in any inordinate degree tend to be rare throughout the world.

The predictions as to the future hazards to mankind are, generally speaking, based on these findings. Why is it then that the conclusions drawn are so diametrically opposed?

One reason is the manner of predicting the future. What types of nuclear bombs will be tested, and how often is anyone's guess. When arriving at some definite conclusion some sort of premise is needed. If the premises differ, the conclusions are bound to be dissimilar. Because of this situation, the United Nations Scientific Atomic Radiation Committee has set the standard of projected estimates as the same amount of test firings as have actually taken place during the past three years (1954-56).

The question often is raised; "What would happen if all tests were suspended henceforth?" Or, "What is the effect of the radio-activity in future by the amount already generated to date?"

But even with the premises decided upon, no one can say just how much radio-activity will be scattered in a year, or for that matter, the amount released to date. The nation setting off a nuclear blast may know what its bomb will do or has done. But it is almost impossible to find out what others are doing.

Today, a considerable amount of radio-active substances is hanging suspended over our heads. This will sooner or later fall down upon us. We can measure the amount of radio-active rainfall or dust precipitation, as these can be done at the surface of earth where we can reach easily. But it is as yet difficult to determine the radio-active content of the atmosphere at altitudes of several thousand meters. To use high flying planes or balloons to collect samples is a costly proposition. Furthermore, such tropospheric and stratospheric soundings will have to be done many times at many places to know the whole feature of the vast phenomena. Moreover, unless it becomes definitely clear how long it takes for suspended particles to be precipitated on the earth's surface, there is no way of knowing the relationship between future surface precipitation and present atmospheric suspension.

To date, information on this aspect of the problem is extremely meager, consequently the basic data for theoretical calculations used by scientists the world over are as yet far from reliable. This then is one of causes of the differences of opinion.

As for the methods of detecting and measuring the amounts of injurious radio-active substances in food and in human bodies, these call for special skills and costly equipment, so only a handful of research laboratories and scientists throughout the world are capable of taking accurate measurements.

To complicate matters, the forms and kinds of soil, rock, and food materials are myriad, while further disparities exist depending on a multitude of other conditions including time and location. In order to avoid these complexities, some scientists for example, some in the United States and Britain, when investigating the effects of strontium-90, are mostly concentrating their studies on milk, which is a major source of calcium for human consumption. The concentration of strontium-90 deposited in the human bone structure is assumed to result from the follow-

ing sequence:—

Strontium-90 is precipitated on the soil—it is absorbed into grass—grazing cattle feed on the grass —cows give radio-active milk—people drink this milk.

Food Contribution

Some of these scientists are basing their predictions on the assumption that in the course of this passage from soil to the human bone the strontium-90 will have become diluted to from 1/20 to 1/80 of the soil to that in human bone through the above mentioned process and this discrimination would go all through the future. But there are two fallacies in this assumption.

It may be true that for Europeans and Americans milk is the source of 80 percent of all the calcium ingested. In which case, since strontium-90 concentration in milk is relatively low, it looks like that the drinking of milk as a major source of calcium cannot cause much harm. However, if, among the foods furnishing the remaining 20 percent of the body's calcium requirements, there are items having a considerably higher strontium-calcium ratio, say from 10 to 20 times that of milk (e.g. fish, rice &c.), then these secondary sources of calcium will have a much bigger effect than milk, as far as strontium-90 contribution is concerned. In other words, milk may be the major purveyor of calcium, but it definitely cannot be said to be the major source of strontium-90. Next, the fact must be faced that the people accustomed to milk for 80 percent of their calcium supply are only those with the eating habits of a part of the world. Most Eastern peoples have different diets, so to say that the world is safe because one's own people appear to be beyond danger can be construed as meaning: "I don't care what happens to others so long as I'm all right."

The Japanese, like the peoples of most other Asian nations, consume large quantities of rice, their staple food. A great deal of fish is also eaten. Among the major food items of the Japanese it is evident, to date, that rice may well be the main source of strontium-90, although fish supply lots of strontium, but the level of Sr-90 is fairly low. And, also vegetarians are taking higher Sr-90 than any others. This applies to other rice-dependent Asians. In this connection, the conclusions of some "experts" in the United States and Britain are useless as criteria for safeguarding the health of even their own people, let alone the peoples of the East.

Equilibrium

The second fallacy concerns the concentration ratio of strontium-90 in soil, grass, cattle, milk and humans. The recent figure of ratio of the level between these measured in Japan is not appreciably different from those observed in the United States and Britain. But what has been overlooked is the fact that the ratios may change in the future. The assumption that the percentages will remain constant has led to unwarranted optimism.

It is true that to date Japanese data also indicate the concentrations of strontium-90 in the bones of the average Japanese to be, using a proper conversion factor, about 1/100 of the ground precipitation, and also about the same ratio of the average whole diet of Japanese.

But the writer is inclined to believe, contrary to the thinking of some scientists, that although conditions today is as stated above the concentration of strontium-90 in human bones will in future steadily increase to approach the average indicated by foods, and in the not-too-distant future the concentration levels will become identical.

Today, only a short time (3 or 4 years) has elapsed since the start or large-scale nuclear bomb tests. The human bone structure, in the adult, contains about 1 kilogram of calcium. Combined with this calcium is from 0.1 to 7 grams of strontium and to have this strontium replaced by strontium containing strontium-90 will take more than a dozen years in case of grown-up adult. Consequently, as matters stand at present, the existing reserve of strontium, present in relatively big amounts, dilutes the newly added strontium-90 to keep its total concentration low. But should the nuclear bomb tests be continued to increase the concentration of strontium-90 on the earth's surface, the strontium-90 concentration in food will also increase.

With this condition permitted to continue, the contaminated strontium in food will gradually replace the strontium present in human bone, so that in a dozen years or so the concentrations of strontium-90 in food and in human bone will attain a state of equilibrium at near parity. With growing children, this equilibrium will be reached sooner. This is because the body of the developing child is built up of the food it ingests, even though the child now living does already possess some amount of reserve of uncontaminated strontium to dilute, so that the strontium-90 concentration ratio (food: bone) is slightly higher than in the case of the adult.

Such delay of many years for contamination of bone from that of food to reach a state of equilibrium is characteristic of such substances as strontium and calcium; but with other radio-active material such as cesium-137, equilibrium between the concentration prevailing on the earth's surface and the concentration in human bone is reached much sooner in a matter of months.

Consequently, there is a vast difference between the theory that the ratio of radio-active concentrations in food and in the human bone remains constant in future and the concept of progressive change as advanced by the writer.

On the basis of the writer's thinking, if the nuclear bomb tests are continued at the present rate the concentration of strontium-90 in the human bone structure will reach the maximum permissible level in a matter of a dozen or so years.

Tolerable Level

The term "maximum permissible level" has just been used here. At present, the "maximum permissible" concentration of radio-activity in the human body is a rather ambiguous expression. It is known, through animal experiments and accidental exposure of human beings to radiation, what amounts of radiation dosages result in what degree of damage. From this knowledge it has been possible to arrive tentatively at what may be considered safe amounts of radiation (maximum permissible dose-rate) for industrial workers and for the general public. The level for the former is 0.3 roentgen per week, and for the latter, 0.03 roentgen per week. Because radiation damage to human tissue is as yet incom-

pletely understood, the establishment of such "safe" levels is open to question. But at any rate a yardstick at least is available.

When the human bone is exposed to a heavy dose of radiation, it is known that bone cancer or leukemia are caused. Nevertheless, to date merely an approximate calculation has been made as to what concentration of strontium-90 in the human bone gives what dosage of radiation to the blood-producing part of bone marrow. This is because, for one thing, the strontium-90 came in newly tends to lodge where growth is taking place, which differs according to the kind of bone; while blood-production also depends on the type of bone and the locality in the marrow.

On the subject of strontium-90 alone, there still remain many things in a vast area that have yet to be ascertained before one can possibly risk any precise prediction on the effects of this radio-active fission product on the future of mankind.

True, there are such aids to scientists as the amount of fission products released by test-bombs, something that cannot be hidden by the nations undertaking nuclear weapons tests. On the other hand, there are such matters as radio-activity in soil and in food, analyses of human bone, and the distribution of strontium that must be intensively and patiently studied. For, concentrations of radio-active substances vary from soil to soil, and from food to food, while absorption by human beings also seems to vary widely. (In the case of human bone, variances by as much as 50 times have been found among Japanese, while in the case of food the extremes are apart by as much as 10,000 times.) By accumulation of more accurate knowledge it will become possible gradually to predict the future with increasing certainty. When there is no great disparity among the figures cited by the scientisfs the world over there should be little to fear; but when the discrepancies are glaring some one is making a mistake. The sooner any error is corrected the better.

Genetic Influence

Leaving strontium-90 for a while, let us turn to cesium-137. In the case of cesium-137, there is no great time-lag as in the case of strontium-90 before concentration equilibrium is reached between precipitated amount and the amount absorbed into the human body. If nuclear bomb tests continue at the present rate the radiation of the human reproductive organs by cesium-137 is supposed to be less than the dosage given to the bone by strontium-90. Nevertheless, this does not mean that there is little or no hazard; because in this case the radiation directly affects heredity.

Genetics, in so far as human beings are concerned, is a science from which direct experimentation is precluded. Only deductions on the basis of experiments with other living organisms are possible. But according to most geneticists the occurrence of mutations is in proportion to the radiation to which the organism is exposed. If this theory is applicable to the human race, then the slight increase in radio-activity should result in increase of generation of mutations.

On the other hand there is no evidence, because experimentation is impossible, that human beings or for that matter all living organism can exist without exposure to any ionization radiation. Many types of considerable radiation exist in nature. People lving at high altitudes are exposed to many times the amount of cosmic ray dosage received by dwellers in the lowlands. Difference of radiations dosage from radio-activity in the ground or the house is over 10-fold in some locations from that in others. The radiation dosage of carbon-14 or potassium-40 naturally contained in human body without harm differs considerably between individuals and somewhat less so between sexes; for example more carbon-14 exist in fat men than thin men. These discrepancies exist in nature, and are unavoidable inequalities.

Consequently, this gives rise, on the one hand, to the contention that since these natural radio-activity hazards exist in the first place the human race should be able to put up with the generation of mutation, which are greater, of radiation from fission products at present and also in some near future. While conversely the opposition argues that natural inequalities and hazards cannot be avoided, but it is inexcusable to add to these hazards by altogether unnecessary testing of nuclear weapons.

Human in Atomic Age

Progress in civilization is gennerally attended by dangers. Mankind, now that it has entered the era of nuclear energy, must inevitably face the risk of more radiation than heretofore, perhaps in greater amounts than during the period since the invention of the X-ray.

Whether or not such added hazard should be condoned must, it goes without saying, be judged on the basis either of moral standards of social need—whether it is good or bad; whether it is necessary or unnecessary.

The problem is essentially one of ethics, with a parallel found in the use of the X-ray. It often happens that persons undergoing cancer therapy by X-ray receive more than the "safe" dosage of radiation and the dosage for diagnostic-X-ray examination is also hard to be neglected. The risk taken here is for a necessary or good purpose—the prevention of disease, pulmonary tuberculosis in particular, of early detection of cancer—so although precautions are called for there is no ground for saying that X-ray disgnosis should be abandoned.

Recently, because of the worldwide furor about nuclear bomb tests the real issue has tended to become obscured. The tests are steadily going to build up the radio-active contamination of the earth. If these tests are continued the maximum permissible level will go up so that in the event of atomic warfare the critical point level will immediately be exceeded by merely adding a few more fission producers from the nuclear weopons fired. There will be no escape from the horrendous sub-microscopic particles emanating deadly rays, which will penetrate and lodge in all things necessary for the existence of living organisms. Finally a note should be made of the fact that the nuclear reactors, purportedly for peaceful use, and being planned without careful consideration of necessity or worth, emit the same deadly waste.

(*The writer is professor at the University of Tokyo*)

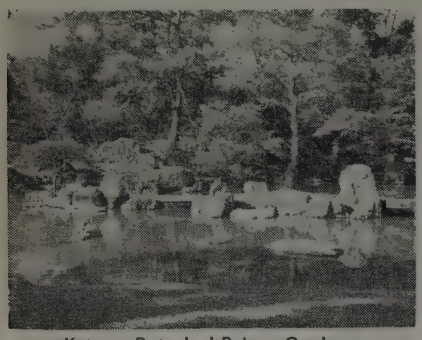
Glimpses of Japanese Culture

Japanese Garden

By Osamu Mori

The Japanese garden is one of the most brilliant examples of landscape gardening. Its style is striking compared with that of the typical Western garden, which features groomed lawns, trimmed trees, meticulously constructed flowerbeds and a geometrically arranged plan. But "nature imitation" gardening is not confined to Japan alone. It was very common in ancient China, the pioneer of Oriental culture. Even in Europe, a sort of nature gardening was in vogue, especially in England, some two hundred years ago.

The Japanese manner of gardening, however, is not entirely in line with that found in China and some parts of Europe. In ancient China, the main feature was the incorporation of natural structures, sometimes a mountain lake and sometimes a cliff, into the garden and creation of a man-made paradise by adding a pond here and a slender island there. In England, whose climate is considerably different from that of Japan, another sort of nature gardening developed. It was an accurate imitation of nature complete with pastures made of burnt-down virgin forests; lakes, rivers and hamlets in a wide rural expanse.



Katsura Detached Palace Garden

Japanese gardening in its most rigid sense resembles neither of these two. As an attentive little stroll through the many scenic spots in and around Kyoto will convince you, landscape gardening in Japan developed on the Chinese pattern, but has grown into a quite different type of art. In the remote past, Japanese landscape gardeners utilized nature to the fullest extent, as their Chinese counterparts. Since the middle ages, however, these gardeners began to create the atmosphere of the sea, mountain ranges, water-falls, rivers and many other aspects of nature in the absence of real water. Once invented, this symbolic way of representing nature in the small confines of a garden gained increasing popularity from the characteristic Japanese inclination towards the simple and the suggested.

In this way of gardening, one tries to recreate in one's own aesthetics a scene remembered from the past—a strange rise in a terrain, a curious-looking stone, wavy, elegant rows of trees. The details were explained in "Sakuteiki" (The Way of Gardening) published some 900 years ago. The book emphasises that gardens should not be mere imitations of nature but places where the important should reign over the insignificant and where nature as seen by the particular gardener should triumph over all the conventionalities. This is a clear declaration of symbolism in gardening. Japanese landscape gardening, in other words, is not prosaic, so to speak, but is based on the symbolic vision of a master poet. In yet another way of expression, Japanese gardeners have accomplished in gardening what Japanese poets, particularly tanka (a small poem with only 31 syllables) or haiku (complete with mere 17 syllables) masters, have done in literature. They have established a system of choosing only a few symbolic aspects in nature, turning them into a universe full of suggestion and meaning. For example, a cluster of pruned trees came to represent a distant mountain range and an oblong stone standing on end, a water-fall or a cliff. A stone lying on its side under which a tunnel is dug represents a bridge, and the tunnel, a flow of water. An old stone lantern in a cluster of trees symbolizes the loneliness of a shaded path to an old temple. Through the centuries, there developed a set of rules governing the symbols, the mastery of which gives one an easier understanding of Japanese gardens.

Of course there are many Japanese gardens which utilize no symbolic objects and which are open books to every intelligent visitor, but there are equally numerous gardens, especially in the Zen Buddhist temple compounds, where the gardeners seem to have embarked upon achieving a sort of "pure art" by abstract arrangements of stones and other inanimate objects. Those gardeners, like their india ink painter friends, tried to "suggest" rather than to "represent". They limited the use of trees and other "conventional" garden elements to a minimum. Instead, they utilized space and the sense of space to the maximum possible.

Japanese gardeners, in other words, tried to carry out the advice of a certain 17th century poet, who proposed that "it is better to 'suggest' a forest by fallen leaves rather than to actually make one". Katsura Detached Palace in Kyoto, which was built 330 years ago, is the culmination of this abstract way of gardening. There, nature is recast in the gardeners' mind and the space is reconstructed by setting up lumber walls all around the compound. A slight rise in the premises, and stepping stones in different heights, symbolize the partitions of space and a simple arrangement of square slates and oblong cluster of pruned trees brought exquisite beauty and meaning to the over-all garden plan. The garden in Katsura Detached Palace premises is the symbol of the timeless beauty of the Japanese garden.

One of the questions I am most frequently asked by foreign visitors here is what are the ten best gardens in Japan. Of course I have my own choices but here I would like to set forth the ten gardens voted best by my garden specialist and photographer friends.

1. *Katsura Detached Palace Garden, Kyoto, built during the early Edo Period (1620–45).* The original Katsura Detached Palace was built with the latest technique of the day from 1620 to 1624 at the order of Prince Toshihito, younger brother to Emperor Goyozei. The Palace and its garden were modeled on Katsura Dono built during Fujiwara Period according to the current view of nature. Also incorporated are views on housing expressed in Hakushi Monju (a classical Chinese book of essays) and interpretation of nature from the Tales of Genji.

In 1645, Prince Toshitada, a son to Toshihito, added a new palace, outdoor resting places, two pavillions Shokatei and Shoiken, and the gardens around the structures. It is next to impossible to pick out any one specially laudable effort in this faultlessly wonderful garden but the structural designs in the gardens in front of the approach and around the study merit particular mention. The best view is that looking toward the Shokintei Pavillion and Shinsenjima Island from Tsukimidai (Moon View Verandah) of the old Study or from the east corridor of Gepparo (Moon Wave Pavillion). No less striking view is available when one looks down along the garden path from the outdoor resting place with the garden pond shimmering to the right of the path. The eaves of the tea-houses found here and there in the garden are excellent beyond description, while the paving stones and stepping stones not only appeal to the sight but also to all the other senses, changing the quality of their appeal by the angle of view. The beauty of the garden is further accelerated as one crosses the stone bridge spanning the Oi River to admire the magnificence of Amanohashidate to the right and the white sand bar to the left and as one approaches Shokintei stepping from one stone in the pond to another.

Shugakuin Detached Palace Garden

2. *Shugakuin Detached Palace Garden, Kyoto, built also in early Edo Period (1655–59).* Situated to the west foot of the famous Mount Hiei, the Palace commands a breath-taking view of the wide green span of Yamashiro Field. The garden is divided into three parts—upper, middle and lower, which are separate gardens connected by a causeway planted with miniature pine trees. The upper and the middle gardens were completed during the five year period from 1655 to 1659 at the direct instructions of the retired Emperor Gominoo. The lower garden features the main tea-house Jugetsukan and, in autumn, flaming maple leaves. Near the pond to the west of the tea-house is a sleeve-shaped stone lantern, while a scull-shaped one is placed near a little stream pouring into the pond. In

the middle of the upper garden, there is a pond called Yokuryuike (A Bath for Dragons) formed by a dam with the water coming out of Mount Hiei. A small island which used to be a rise in the range dominates the pond. An impressive array of ever-green trees dotted with bright color maples decorate the stone works and the slopes all around the pond. The middle garden was originally built in 1668 for Princess Akenomiya Teruko, the eighth daughter of the retired Emperor Gominoo. Rakushiken, a solitary residence for the Imperial princess, is in the center and the garden literally exude the loneliness of a royal princess destined to lead a life of celibacy.

Saihoji Temple Garden

3. *Saihoji Temple Garden, Kyoto, built in 1338.* This temple is the place where the famous Zen Priest Muso Kokushi lived and practised his theory of Zen 616 years ago. The natural features of the site are dexterously exploited; water is led into a concave flat land to make a pond, Ogonike (Golden Pond) in the midst of which two islands push themselves out of the water. Around the pond, there stood such magnificent structures as Sairaido, Tanhokutei and the two-storied Ruriden. The stone pavements and fine velvety moss surround the pond to create beautiful scene. The name of Muso Kokushi will be long remembered for the bold imagination he displayed in producing the magnificent stone works that now adorn the gentle slopes beyond the pond.

4. *Ryoanji Temple Garden, Kyoto, built in 1499.* The unique feature of Ryoanji Temple Garden, in a word, is the complete absence of trees or grass. The garden is made up completely of sand and stones. Gaun Nikkenroku, a collection of a Zen priest's essays, published some five hundred years ago is of very much help in explaining what this austere garden is all about. An article in the collection tells of a round rice cake called Karasansui (Chinese Landscape) which is served on a paper or a tray. The main characteristic of this cake is that it requires no water in its making, while in the usual cakes, water is one of the most important ingredients. So it is presumed that, at that time, there may have been a school of thought that tried to create something, leaving out what was considered an essential element.

Anyway, the fifteen stones in the oblong garden are very impressive. The viewer can take the stones for those in the turbulent sea or the mountain tops in the clouds or even the dancing Buddhist disciples. Apart from precisely what the gardener intended to represent, the beautiful sense of balance of the stones and the thick earth-work walls around the garden are undisputably impressive. Hitherto, stones had been only an auxiliary part of a garden, but in the Ryoanji Temple Garden, stones play the role of a sole host to the visitors.

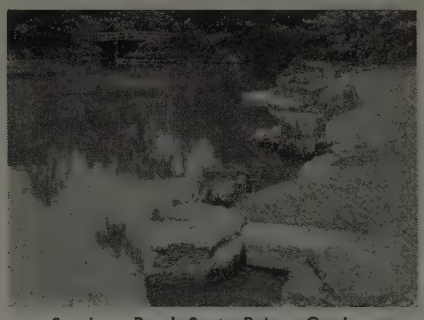
5. *Tenryuji Temple Garden, Kyoto, built in 1345.* In 1345, Shogun Ashikaga Takauji established a temple for the late Emperor Godaigo at the site of a detached palace of the retired Emperor Kameyama, and named it Tenryuji. In front of the superior's quarters, there is a pond, beyond which a cascade drops into a cluster of standing stones. Although the place suffered from fires many times, the stone works created here by Muso Kokushi are as wonderful as his masterpieces at Saihoji Temple mentioned above.

Ryoanji Temple Garden

6. *Daisenin Garden, Kyoto, built in 1509.* As the signboard on its gate says, the superior's quarters and the study of Daisenin were built in 1509. So it is presumed that the garden attached to them also dates back to about that time. The central theme of the garden is the rapid mountain stream. In order to put the grandeur of nature into a small space embracing the east and west sides of the study, the gardener tried to symbolize the far-off mountains by a pruned hedge of trees, cliffs and water-falls by stones on their ends, bridges and ships by stones lying on their sides. Until a few years ago, the moss represented flowing water but now white sand has replaced it. The remarkable fact is that this scenery is more like nature than nature itself.

7. *Shinjuan Garden, Kyoto, built in 1638.* Although the original Shinjuan was built in the middle of the Muromachi Period, it was burned down during the Civil War Period. It was restored, however, in 1638. The stepping stone groupings consisting of seven, five, and three respectively in the east garden are especially well known. The garden is the last word in the tea garden category.

8. *Sanboin Garden, Kyoto, built during 1598 and 1615.* In the spring of 1598, Shogun Toyotomi Hideyoshi consulted Gienjugo, a priest, on a plan to restore Sanboin Temple. Once embarked upon the project, Hideyoshi was so engrossed with the undertaking that he camped in the project site to direct operations. Unfortunately, Hideyoshi did not see the temple completed, as he died in the following autumn. Gienjugo continued with the work and completed it in 1615. The grandeur of the garden is unparalleled with more than 700 stones and several thousand trees collected from all over Japan for the garden. Especially famous are the Fujito stone and drooping cherry trees in the middle of the garden. It also has an interesting pond, with several islands connected by various bridges both wooden and earthen.



Southern Pond, Sento Palace Garden

9. *Sento Palace Garden, Kyoto, built during 1629 and 1687.* There are actually two gardens in the Sento Palace premises; northern and southern, each of which features a pond. The northern garden used to be a part of Nyoin Palace (built for ex-Empress Tofukumonin) while the southern garden used to belong to the palace of the Emperor Gominoo. The north-eastern corner of the northern garden was originally built by Shogun Toyotomi Hideyoshi for his wife. The pond in the southern garden has a water-fall in its north-eastern corner and an island in the middle, which is connected with the shore by two stone bridgss. Stretching from the western shore to the eastern shore; in the southern pond is a bar of round pebbles. The existing water path connecting the northern pond with the southern was built much later in 1747. As the original Sento Palace was the work of Kobori Enshu, the famous artist of the day, it should have been magnificent, but unfortunately only a part of the stone work around the pond is undisturbed.

10. *Joruriji Temple Garden, Kyoto, built in 1150.* During the Heian Period, the courtnobles were engrossed with the idea of creating a paradise in this world. The result is the successive emergence of the temples for Amida Nyorai, the god of mercy. Most famous among them are Byodoin at Uji, Mootsuji at Hiraizumi and Joruriji Temple at the crossroads of Kyoto Prefecture and Nara Prefecture. The temple and its garden are at their best in spring and autumn when the trees lining the garden pond put on their dressy leaves and the temple casts its time-less shadow upon the clear and beautiful water.

(The writer is in charge of Architecture and Garden Department, National Nara Cultural Property Protection Commission)

Kaleidoscope

Exports of Technological Know-how:—Tokyo Shibaura Electric Co. of Japan has reached agreement with ECE (Electric Construction & Equipment) Co. of India to provide the latter with the technological knowledge of heavy electric machinery. In line with the agreement, Tokyo Shibaura Electric will instruct the Indian company in manufacturing such heavy electric machinery as 25–2,500 KVA electric transformers, electric converters and transformers for meters and gauges in the coming five year period.

Steel Mills in Minas, Brazil:—Contracts for building steel mills in Minas Gerais, Brazil as a joint project of Japan and Brazil were finally inked on June 4 in Brazil. The first contingent of Japanese technicians is expected to cross the Pacific by the end of summer. The mills are expected to turn out annually 500,000 tons of steel ingots (250,000 tons in terms of steel materials) six years from now. The rate of capital investment is 6 for Brazil and 4 for Japan.

Local Government Officials by Parties:—According to the Autonomy Board, independents are by far the largest group in the local government offices except prefectural assemblies, where the Liberal-Democrats dominate. This is a clear indication that the two-party system which is supposedly in operation now in Japan has no grass-root supports. The following is the local government office holders by parties:

	Governors	Prefectural Assemblymen	Mayors	City Assemblymen	Town Headsmen	Town Assembymen
Seats	46	2,614	500	16,821	3,365	77,224
Liberal-Democrats..	8 (17.78%)	1,788 (69.54%)	50 (10.00%)	3,360 (20.38%)	224 (6.71%)	6,165 (8.17%)
Socialists	3 (6.67%)	483 (18.79%)	11 (2.20%)	968 (5.87%)	1 (0.48%)	748 (0.99%)
Communists ..	—	10 (0.39%)	—	157 (0.95%)	1 (0.003%)	310 (0.42%)
Minor Parties	—	121 (4.71%)	2 (0.40%)	181 (1.10%)	1 (0.003%)	60 (0.01%)
Independents..	34 (75.56%)	199 (6.57%)	434 (86.80%)	11,817 (71.69%)	3,094 (92.75%)	68,202 (90.35%)
Vacancies	1	43	3	329	29	1,739

Productivity in Aircraft Industry:—Productivity is retarded but the future is bright. This is the conclusion that the Japan Aircraft Industry Association has reached after its intensive overhaul of 30 aircraft and related industry companies. According to the Association's published reports, per capita per annum sales amount in the aircraft industry is only ¥340,000. Compared to the average ¥1,202,000 sales per capita in the whole manufacturing industry average, the figure is decidedly poor. Moreover, the labor expenses rate (the rate of labor expenses divided by sales amount) in the aircraft industry now stands at 34.3%, about three times the whole manufacturing average. While in the whole manufacturing industry, the rate of floating assets and fixed assets is 58 to 42, the figures stand at 67 to 33 in the aircraft industry. The rate of debts and owned capital in the whole manufacturing stands at 60 to 40, while in the aircraft industry the figures are 64 to 36. The added value rate in the aircraft industry is extremely high with only 28.7% of production costs accounting for materials outlay, while in other manufacturing industries, average 52.3% of all production costs goes for materials.

Steel Production Plan Revised:—In view of increased production of blast furnace pig iron, stepped-up importation of scrap iron from the United States and the unexpectedly brisk collection of local scraps, MITI has decided to revise the 1957 Iron & Steel Production Plan. Compared to the original plan, iron production was increased 3.3% to 7,310,000 tons, iron ores 7.2% to 13,850,000 tons while the steel materials (including rerolled steel materials) grew 6% to 10,060,000 tons. Together with the stepped-up production of local steel materials, about 600,000 tons of foreign steel materials are expected to arrive by the end of September. So the supply of steel will be much more relaxed than it is now.

Increase of Tax Revenue:—General accounts tax revenue for 1956 proved to be 14.8% (123 billion yen) more than initially expected—a sure sign of the industry's prosperity in that year. Even compared with the revised budget, the tax revenue registered 7.9% (¥69,562,000,000) growth. When such special account taxes as admission taxes and local road tolls are added, the increase amounts to ¥971,051,000,000 (14.4% more than expected). This is 7.7% more than the figure in the revised budget. In detail, revenue from income taxes increased by ¥303,608,000,000, corporate income taxes by ¥259,135,000,000 and liquor taxes by ¥172,789,000,000. These figures represent respectively 7.9%, 8.4% and 2.3% more than expected in the revised budget.

Machinery Orders:—According to the Economic Planning Board, machinery orders received during fiscal 1956 totalled ¥758,000,000,000, 80% more than 1955. Especially brisk was the domestic demands which climbed to ¥542,200,000,000, an amazing 143% growth over the previous fiscal year. Reflecting the investment-minded local industries, private demands grew 166% over 1955 to ¥483,600,000,000, while the Government demands barely passed the 40% increase mark. Overseas demands, which showed an 86% increase in 1955 over 1954, did not repeat the feat in 1956 with only 5.8% increase registered over the previous year.

Plant Investment :—Plant Investment for 1956 was far bigger (77%) more than the previous year) than initially expected. But compared to the 1957 plant investment expectation (853 billion yen; 33% increase over 1956), the figure is still dwarfish. One of the most salient characieristics of 1957 plant investment is that most of the outlay goes for primary industries as is evidenced in the cases of iron and electricity. Together the two key industries are to get half of the total investment outlay for 1957.

Automobile Exports:—A sort of boom has set in for the automobile exports, which, in the first six months of 1957, has already eclipsed the annual exports mark of 2,455 cars established in 1956. According to the Automobile Industry Association, the number of cars exported was 271 for January; 402 for February; 387 for March, 564 for April and 306 for May. On top of this, the number for June is expected to reach 760 cars to make the half-year total to 2,690 cars. The cardinal reason for the sudden brisk activities in the automobile exports is naturally the lowering of production cost which made the local cars worthy of world attention.

Bigger Corporate Income :—According to the Tax Administration Agency, the corporate income for the term ending March for the bigger companies (with more than ¥100,000,000 capital; 766 companies surveyed) reached the amazing total of ¥169,807,000,000, a growth of 30.8% over the previous term ending September, 1956. In detail, banking interest copped ¥32,852,000,000, an increase of 29.9% over the September term; primary metals, ¥11,905,000 (97.4% growth); textiles, ¥11,034,000,000 (0.5% increase) and mining, ¥11,883,000,000 (16.6% growth). Other businesses that grew by leaps and bounds include foreign trade (52.7% increase); electric machinery (41.9%); transportation equipments (46.3%); machinery (77.2%); rubber (41.3%); and construction (57.5%).

Commodity Market

Cotton Goods:—The cotton yarn market failed to extricate itself out of a semi-chronic depression with prices on the steady downgrade from mid-May through early June. The quotation of 20s yarn at the Osaka sampin market, which started May at ¥181.50 per lb., closed the month at the ¥160 mark. The 30s item also slipped from ¥204.60 to the ¥180 mark during the same period. Swelling inventories due to inactive demand at home and the increasing impact of short money were the two major causes for the lethargy. The April production of cotton yarn totalled 243,500 bales while the exports for the month reached 89,200 bales, but the domestic demand stood still at 137,600 bales, with the month-end balance of 487,700 bales brought forward into May. Although the details of the May supply and demand have not as yet been made known, the prospects are considered generally discouraging. With the production estimated to dip to 239,500 bales and the exports boosted to 92,200 bales for May, the domestic demand is expected to continue low at around 125,000–135,000 bales. Thus, the May-end balance of inventories is estimated to have stood at 500,000–510,000 bales. The market, however, has begun to stiffen towards the end of June due to two new developments. The curtailment of cotton imports by 200,000 bales for the first half and 200,000–300,000 bales for the second half is expected inevitable because of the worsening balance of foreign exchange payments while the production of chemical fibres is due to drop by the strike of synthetic textile workers.

Raw Silk:—Raw silk quotations continued steady into May, but began to slip from mid-May under the impact of the tight-money repercussions. The Yokohama raw silk quotation (21A per *kin*), which started May at ¥2,090, dived to ¥1,980 by the end of the month. The raw silk production in the first three months of this year (January to March) totalled 67,735 bales, a decline of 2,800 bales from the output in the like period a year ago. Domestic deliveries in the first three months amounted to 56,656 bales, marking an increase of 9,700 bales over a year ago. The production of silk fabrics in the January-March period totalled 51,798 bales, up 11,500 bales over a year ago while fabrics exports reached 8,009 bales, up 3,157 bales. On the other hand, raw silk exports during the interim slipped by 3,200 bales from a year ago to 14,729 bales.

Chemical Fibres:—The quotation of rayon filament yarn, which collapsed in May, continued weak into June to hit a low at ¥159.40 on June 7. The price later began to rally to about ¥170.00, but the recovery tempo has been slow. Responsible for the rayon filament yarn stalemate were the supply increase and tight money while the recovery was based on the rumored "approach of production curtailment."

The filament rayon yarn market, which made a heavy collapse in May, continued weak into June with the quotation (for current delivery) diving to ¥159.40 on June 7. The market then began to recover to reach ¥170.00 on June 19, but the rally has since been slow and inactive. Responsible for the May collapse were the increasing signs of oversupply and new tight-money measures adopted by the Government, while the rumored production curtailment came in support of the later recovery. The monthly production of rayon filament yarn, which stood at 16,400,000 lbs. in January, rose to 19,250,000 lbs. in April and further soared to 20,100,000 lbs. in May. Exports, on the other hand, have continued quiet. Hence stockpiles have been mounting in yarn as well as in fabrics. The balance of inventories as of the end of April, inclusive of those in the hands of manufacturers and wholesalers, reached 22,850,000 lbs. in yarn and 129,750,000 sq. yards in fabrics (23,170,000 lbs. in terms of yarn)—the combined total of 46,020,000 lbs. Although the production curtailment of yarn appears to be the only remedy to the present situation, the Ministry of International Trade & Industry has been extremely cautious in issuing the production cut recommendation, despite the wishes of six major manufacturers for an early suggestion for production reduction. The spun rayon yarn quotations, which rallied somewhat in March through April due to the production curtailment, continued declining from May through June with the latest prices set around ¥107, well below the break-even point as the production cost includes ¥84 for material spun rayon and ¥25 for processing cost. With the spun rayon production curtailed during the April-June period by a MITI recommendation, the production of spun rayon yarn has been left unmolested. Hence, the impact of overproduction has shifted from the former to the latter. With the advent of the demand season and with the imports of raw cotton and wool likely to be squeezed under the import curbing policy, however, both spun rayon and spun rayon yarn are bound to recover in the July–September period particularly as the spun rayon production cut is certain to continue into the summer.

Woollen Yarn:—Woollen yarn quotations have kept on dropping since April with the June 12 price registering ¥885. Major deterrents to the woollen yarn market are 1) poor sales of spring items; 2) the bad outlook for summer items; 3) inactive purchases of yarn by spinners; and 4) mounting inventories in the hands of city wholesalers and spinning mills. In addition to these dampers, the recent tightening of money has offered an additional brake. No further dive of the woollen yarn prices is generally considered likely in view of the presence of some new stimulants such as 1) the drastic cut of the wool import exchange allocation in the wake of the sharp reduction of the cotton import fund. The original wool import goal of 1,000,000 bales is likely to be squeezed into 1,000,000 bales; 2) a favorable tone of exports with the January–April total up 40% over the like period a year ago; 3) the stiff tone of Australian wool quotations, and the prospective poor supply next year due to a prolonged drought; 4) efforts of domestic manufacturers to boost the price to the break-even point set at around ¥950.

MAJOR TEXTILE QUOTATIONS

	Cotton Yarn (Osaka)	Rayon Yarn (Osaka)	Spun Rayon Yarn (Osaka)	Woollen Yarn (Nagoya)	Raw Silk (Yokohama)
1957: Mar. 2	175.3	216.9	114.5	1,074	2,014
9	175.0	218.0	113.1	1,037	2,050
16	175.9	213.0	113.1	1,012	2,046
23	180.5	200.2	113.8	1,030	2,030
30	185.0	210.9	118.6	1,076	2,069
Apr. 6	184.9	203.5	118.5	1,046	2,073
13	188.5	214.9	119.0	1,069	2,080
20	185.2	209.6	117.0	1,056	2,119
27	181.7	197.5	115.2	1,037	2,090
May 4	178.0	185.2	114.0	988	2,089
11	176.0	176.1	111.8	950	2,051
18	171.6	170.9	109.5	915	2,030
25	168.1	171.5	109.9	925	2,016
June 1	167.8	163.1	110.4	924	1,971
8	165.0	163.0	107.7	892	1,963
15	167.5	164.1	107.9	901	1,981

Foreign Trade

The optimism in balancing Japan's international payments which still lingered among some quarters now seems entirely submerged in the growing alarm aired by even some of those who once boldly tried to pursuade the people not to be overly timid. Export trade has been continuously on the increase. Yet by far the greater have been the increases in imports. With considerable difficulty Japan has been asking the United States to lessen the quite rigid and strict pressures of the embargo imposed upon many goods which Japan wished to sell to China. Ture, Britain has expressed its intention towards removing some of the restrictions on trade with China under Chincom. But it is not likely that Japan would soon be benefited by such movement. Worse still, purchases by the U.S. forces in Japan, a great factor in offsetting Japan's adverse balance, will surely be gone in the near future.

Worsened International Payments

The worsening of Japan's international balance of payments assumed a grave tone. Exports in May totaled $237 million (f.o.b.), an increase of $12 million over April. Imports totaled $451 million (c.i.f.), also surpassing April which registered the highest amount since the war. Thus the imports exceeded the exports by $214 million. Exports in Jan.-May totaled $1,118 million, an increase of 18% over the corresponding period of 1956. Imports amounted to $1,949 million, an increase of 60%. Imports, except for food which declined 3%, all increased, raw materials for metal manufacture such as iron ore and scrap iron 2.4 fold, coal and petroleum 1.8 fold.

Foreign exchange receipts in May totaled $310 million, payments $407 million, balancing adversely at $97 million, a worsening by $40 million from the previous month. The balance became $117 million when the deferred payments were taken into account. Thus Japan's adverse balance at the end of May since the beginning of 1957 was $286 million (including deferred payments) and $417 million without deferred payments. Japan's foreign exchange holdings decreased by $315 million during the period from Jan. 1, 1957 to the end of April to $1,106 million. A further decline during May reduced them to $987 million. The figure, however, includes the arrears in Indonesia, South Korea and Argentina which total $260 million and $390 million held by the Bank of Japan. Therefore only less than $340 million is immediately available.

1. FOREIGN EXCHANGE

(In $1,000,000)

	1955	1956	Increase or Decrease (↔)
Receipts			
Exports	1,954	2,402	448
Invisibles	714	823	109
U.S. Forces Procurement	157	227	70
Others	557	595	38
Total	2,668	3,225	557
Payments			
Imports	1,848	2,470	622
Invisibles	326	461	135
Total	2,174	2,931	857
Balance	494	293	(↔)201

Source: Bank of Japan.

Since the government's measures to curb the worsening balance of international payments such as the increased official discount rate and the tightening in the foreign exchange finance, changes in the volume of Letters of Credit in foreign trade have been closely watched as good signals to find the future trends. Letters of Credit for imports sent in May totaled $320 million, an increase of $18 million over April. Letters of Credit for exports received in May increased over April, but the balance was adverse at more than $100 million. The situation in Letters of Credit is usually reflected on the situation in foreign exchanges two or three months later. Therefore the adverse balance of Letters of Credit in May shows that the adverse balance in foreign exchanges is bound to appear continuously for several months, reducing Japan's holdings of foreign exchanges still further.

2. EXPORTS BY GROUP

(In $1,000,000)

	1955	1956	Increase or Decrease (↔)
Food & Drinks	136	180	44
Textiles	749	871	122
Chemicals	94	107	13
Minerals	85	115	30
Metals	386	340	46
Machinery	247	484	237
Others	314	405	91
Total	2,011	2,501	490

Source: Finance Ministry.

Higher Rates for Import Collaterals

Applicants for import licenses are required to deposit collateral varying in percentage of the value of the proposed import depending on which class of imports it belongs to. On June 3. the government decided to raise the collateral percentages for imports which are not regarded as essential needs and to require collateral in cash be placed in the Bank of Japan, to be enforced from June 4.

The raised percentages are as follows: (a) from 5% to 35% for such non-essentials as cheese, lemons, etc in the Automatic Approval System; (b) from 3–5% to 25% for about 500 items such as crude rubber, scrap rubber, feedstuffs, hog-hair, etc. which are excluded from essentials such as iron ores and crude petroleum in the Automatic Approval System; (c) to 35% for completed automobiles, watches, woollen fabrics, coffee beans, musical instruments in the Funds Allocation System; (d) from 1–3% to 10% for office tools, watch and auto parts.

Restraint on Special Foreign Exchange Allocations

Foreign exchange allocation (now 3% of each export) earned as an incentive for exporting certain products may be used for travel expense abroad and importing consumer goods. Of imports that may be made with foreign exchange thus earned, as from June 8. no license is given above the top limit of amount specified for each item such as black tea, Egyptian cotton. These imports coming into under this restrictive measure do not amount much in value, but it is noteworthy that a new step was taken in one of the foreign allocation systems in order to keep imports from running wild continuously beyond the sound limit Japan can afford today.

White Paper on Trade

Warnings:—The White Paper on Trade in calendar 1956 published on June 4. warned the Japanese against entertaining a light-hearted optimism by taking at face value some overall figures in statistics which are deceptively heartening to the unwary. For instance, statistics show that exports in 1956 increased by 24% over 1955, surpassing the world total exports in the same year which had an increase of only 11% over the previous year. Not only in 1956, but also in the past several years Japan's export increases were at a rate above the average of major countries. This reflects nothing but the fact that Japan had to rebuild her foreign trade almost from scratch when she could finally be allowed to conduct her commerce with other countries on her own since the war. From such a low level of trade volume, it is only natural that the increase rate in exports has been relatively higher than those whose trade volumes had already reached nearly as high a level as they can climb.

The loss of Chinese market has left Japan with the United States as the only big market (20% of the total exports). Liberia and entrepot Hongkong alone bought from Japan more than 5% of

Japan's total exports. Of other regions, East Asia, Southeast Asia, South America, and Oceania comprise Japan's fairly large customers. These regions are little advanced industrially and largely depend on raw material production. They are therefore vulnerable to great changes in the world economy. The bulk of Japanese goods exported to these areas consist of cotton fabrics and other consumer goods, which these customers often can ill afford to buy in large quantities when the first priority must go to equipments for industrialization in times of a deteriorating balance of international payments.

It is true that steel and ships have been exported to Europe and America. But this was largely due to a shortage of supply there. In all likelihood, as soon as the shortage ends, Japan's exports of these must suffer. Exports of consumer goods to these industrial countries warrant no optimism. The restrictive measures taken by the United States on Japanese cotton and woollen fabrics, sewing machines, plywood, and ceramics may well be followed by other countries.

Balance:—Exports in 1956 as registered in the customs entry amounted to $2,500 million, an increase of $490 million (24%) over 1955 and twice the amount in 1953. Imports, on the other hand, totaled to the tune of $3,230 million, an increase of $760 million (31%) over the previous year. Foreign exchange receipts totaled $2,400 million, a 23% increase, and payments $2,470 million, a 34% increase, balancing adversely at $70 million.

More than offsetting the adverse balance, U.S. forces procurement purchases totaling $600 million (an increase of $40 million over 1955) brought $290 million to Japan's favor.

Exports:—Production in 1955 had an increase of 10.2% over 1954, of which about 40% was due to demand overseas. In 1956, on the other hand, the greatest factor for a 21.3% increase over 1955 was for equipping industries in Japan. Only about 20% of the increase was due to purchases from abroad. However, except for iron and steel, domestic demand was not so great as to repress exports, nor were price increases at home enough to menace exports. Exports on the whole kept increasing throughout 1956. The index for export volume (1953=100) rose by 19% to 208 for 1956, recovering up to 86% of the prewar average (1931–36). In spite of the remarkable recovery, Japan whose exports before the war occupied 5% of the world's total exports now dwindled to take up only 2.7%. Export prices in 1956 were 3% higher on the monthly average than 1955, giving 1956 exports far greater increase in value than in quantity over the previous year.

In the breakdown of exports by commodity group, a 12% decrease in metals exhibits a striking contrast with a 96% increase in machinery. The decrease in metals is due to greater demand for them for manufacturing new equipments to industries at home, whereas the huge increase in machinery resulted from a great many bottoms built and exported from Japan. Exported vessels totaled $260 million, more than 3-fold the previous year. A considerable increase was made in the following: food 32%, textiles 16%, and chemicals 15%.

Divided by geographical area, an increase was 24% in North America and 19% in Western Europe. Exports of bottoms to Liberia (American and European ship-owners bought ships registering them of Liberian nationality) increased by $170 million. The total of exports to these areas in 1956 increased by 24%. This takes up 67% of the total increase to the entire world. Increases to east and southeast Asia were by 24%, which resulted in the main from considerable increases to mainland China and ICA purchases. Decreases were registered in exports to Oceania and South America while little change occurred to west Asia. On the whole exports to little industrialized areas tended to be slack.

3. EXPORTS BY GEOGRAPHICAL DIVISION
(In $1,000,000)

	1955	1956	Increase or Decrease (↔)
Asia	843	1,022	179
East Asia	272	406	134
Southeast Asia	485	521	36
West Asia	86	86	0
Europe	206	245	39
Americas	681	785	104
North America	494	613	119
Latin America	186	173	13
Africa	206	393	187
Oceania	76	56	25
Total	2,011	2,501	490

Source: Customs Statistics.

Imports:—In sharp contrast to inactive 1954 and 1955, 1956 saw enormous expansion, a 31% increase over 1955. The index for import volume in 1956 was 138.3 (1953=100), an increase of 27% over 1955, surpassing by 14% over the pre-war (1931–36 average) level for the first time since the war. By commodity group, a striking increase was made in the industrial material group which totaled $2,120 million in 1956, an increase of $641 over 1955. In particular, materials for iron and steel increased to $210 million, more than double the 1955 value. Textile materials, the mainstay of imported materials, totaled nearly $200 million, a 32% increase over the previous year. Semi-finished products of pig iron, rolled steel, aluminium, etc. nearly trebled the amount of 1955 imports, due to greater demand for metals in improving industrial facilities at home. The only exception to the increased imports in 1956 was food which totaled $560 million, a decrease of 12%.

4. IMPORTS BY COMMODITY GROUP
(In $1,000,000)

	1955	1956	Increase or Decrease (↔)
Food & Drinks	625	558	(↔)67
Textile Materials	602	798	196
Metal Ores & Scraps	186	457	271
Coal Petroleum	70	96	26
Other Raw Materials	289	413	124
Chemicals	335	360	25
Machinery	112	163	51
Others	132	161	29
Total	2,471	3,230	759

Source: Customs Statistics.

By geographical division, America, Oceania, Europe, west Asia, Africa all increased more than 30%, but southeast Asia had only a 12% increased and east Asia slightly declined, because of decreases in food imports such as rice and beans.

5. IMPORTS BY GEOGRAPHICAL DIVISION
(In $1,000,000)

	1955	1956	Increase or Decrease (↔)
Asia	904	1,048	144
East Asia	195	183	12
Southeast Asia	551	644	93
West Asia	158	220	62
Europe	175	231	56
Americas	1,125	1,561	436
North America	882	1,210	328
Latin America	243	251	108
Africa	63	101	38
Oceania	204	288	84
Total	2,471	3,230	759

Source: Finance Ministry.

Imports & Production:—Increases in imports in 1956 totalling $759 million, were for the most part increases in industrial materials, amounting to $641 million (43%). $580 million (38%), greatly surpassing the 21.3% increase in production. Two reasons may be pointed out for this. First, replacement for stocks of industrial materials was made. Increases in stocks of imported industrial materials in 1956 are estimated to total $120 million (in the 1955 prices). This is not sufficient to explain the enormous increases in imports in 1956. Secondly, consumption of industrial materials itself rose more than increases in production of the mining-manufacture group. The increases in consumption of imported materials are estimated to be $460 million in the 1955 prices. The limited natural resources in Japan especially for iron and steel and petroleum make Japan heavily depend on imported materials for her expanding economy. This is probably the principal reason why the rate of increase in imported material was higher than the rate of increase in production.

Investment Outlook

Nippon Express

Nippon Express Co., Ltd. (otherwise known by the Japanese name, Nippon Tsuun K.K.), was established originally as a national-policy concern under the provisions of the Nippon Express Co. Law in 1937 when Japan was under a quasi-wartime structure, reorganized itself into a private concern upon the abolition of the Law after the war, and has grown into the present ¥7,200 million establishment. The Company is expected to enforce a 50% capital expansion to increase capital to ¥10,080 million as of August 15, 1957. Through the absorption of local express companies during 20 years of its existence, the Company has a comprehensive net-work of local branches throughout the country. Local branches totalling 4,834 are divided into 9 regional supervisory branch offices, 44 supervisory branch offices, 284 ordinary branches, and 4,496 local business offices. These branches function under the head office located in Tokyo. Nippon Express is engaged in diversified fields of operations including railway express and freight, marine transport and air transportation, international forwarding, warehousing and other incidental business. As of March, 1957, the Company had 72,210 persons in employment, including 31,836 clerical workers and 40,314 field workers. Transport and warehouse operations by the Company are highly mechanized through the extensive use of various modern mechanical equipment and machinery. As of March, 1957, the Company had 6,800 ordinary trucks, 200 small trucks, 5,000 tricycles, 24 automobiles with cranes, 363 forklifts, 75 shovel-loaders, 6 bulldozers, 300 other special-job automobiles, 800 tri-wheel tractors, 170 tractor-wagons, 2,100 tri-wheel tractor wagons, 1,118 other transportation equipment. The Company is placing special emphasis on container transportation and now owns 13,670 containers at the total cost of ¥58,000,000. During the recent half-year period, the Company constructed 52 warehouses and other buildings covering the total space of 3,035 *tsubo*. As of March, 1957, the Company had commercial warehouses covering 161,755 *tsubo* and bonded warehouses covering 103,965 *tsubo*, making 265,720 *tsubo* in all. Its commercial warehouses account for about 9.9% of the total space of commercial warehouses throughout the country. As an authorized Agent of I.A.T.A., Nippon Express is also engaged in international air transportation and has agency contracts for freight and passengers with leading airlines operating to and from Japan. It also has agency contracts for seagoing passengers with 10 member steamship lines of T.P.P.C. and 29 member companies of F.E.P.C. In the field of international forwarding, the Company is engaged in the handling of export and import cargoes jointly with more than 50 first class overseas foreign freight forwarders in 47 countries. Nippon Express and Railway Express (Nippon Express' agent in U.S.) have been moving ocean/rail or air express packages between Japan and the United States by a negotiable through bill of lading of their respective companies at the reduced through rates. Free container service is available for the ocean portion of haul connected with the fast railway or air express service in the United States. A considerable saving of money, time and bother is guaranteed. The Company is now further contemplating the expansion of its through bill of lading service to Japan/Canada traffic. The Company also has a plan to operate air consolidation service between Japan and the United States in the near future and later to European countries. Through its incomparable network, the Company takes care of about 25–26% of the volume of cargoes carried in Japan and also handles nearly 40% of freight transporated by the National Railways. The latest business results of the Company (October, 1956 through March, 1957) were as follows:

BUSINESS RESULTS OF NIPPON EXPRESS
(Oct., 1956–March, 1957)

	Quantities		Revenue	
	1,000 tons	(%)	Million yen	(%)
Express Traffic	66,893	52.7	15,576	54.0
Motor Traffic	10,975	5.7	5,762	20.0
Other Traffic	48,870	38.6	7,485	26.0
Shipping	5,060	4.0	1,311	4.5
Warehousing	7,507	5.9	1,109	3.9
Other transports	15,661	12.4	2,926	10.1
Agency	19,894	15.7	1,245	4.3
Others	748	0.6	894	3.2
Total	126,738	100.0	28,823	100.0

During the same period, the Company achieved the best results in business operations and revenues. A total of 126,738,000 tons of goods were carried gaining 8.0% over the quantity carried in the preceding half-year period while the revenue amounting to ¥28,823,000,000 was a hike of 12.0%. The business revenues of the Company for the past one and a half-years were as follows:

NIPPON EXPRESS BUSINESS REVENUES

	March, 1956	September, 1956	March, 1957
Business income (¥1,000)	25,317,280	25,804,652	28,822,405
Profits (¥1,000)	1,334,449	1,280,256	1,295,002
Profits Rate (%)	37	26	26
Dividend rate (%)	16	16	16

The breakdown of the business status for the fiscal year ended March, 1957 was as follows (in ¥1,000).

Personnel expenses	15,271,845
Business expenses	8,793,375
Other expenses	2,328,723
Total expenses	26,393,943
Balance (profits)	2,916,680
Retirement allowance	1,111,888
Bad debt reserve	50,000
Price fluctuation reserve	28,000
Depreciation	431,790
Total	1,621,678
Balance (declared profit)	1,295,002

As the preceding table shows, the declared profit for the past fiscal year was ¥1,-295,002,000, the actual profit aggregated ¥2,916,680,000, the larger part of which was set aside for internal reserves. The Company is planning to spend some ¥15,000 million for a two-year program for equipment investments with ¥6,100 million already spent in fiscal 1956. The two-year equipment rationalization program will be propelled on the basis of the following activities:

1) more strict control of budget through planned management;
2) more exhaustive personnel management;
3) more rigorous discipline in labor-capital relations;
4) fuller mechanization of field operations;
5) simplification and mechanization of work;
6) more complete collaboration with overseas counterparts for more positive advance to overseas market;
7) more active public relations activities.

Fuji Iron & Steel K. K.

Fuji Iron & Steel Co., Ltd. (now capitalized at ¥13,000 million) was created in April, 1950 as a second company of the defunct Nippon Seitetsu K. K., with the initial capital of ¥400 million. Upon its establishment, the Company took over three iron mills (at Muroran, Hokkaido; Kamaishi, Iwate Prefecture: and Hirohata, Himeji City, Hyogo Prefecture) and the Kawasaki steel mill in Kanagawa Prefecture, from the mother firm. Fuji Iron & Steel at present is devoted to the production and sales of iron-steel products and chemicals. Of the four major plants of the Company, those at Muroran, Kamaishi and Hirohata are integrated steel plants manufacturing finished steel products from pig iron produced from iron ores at their own mills. These three plants also manufacture various chemicals as by-products. Kawasaki Plant, on the other hand, is engaged only in

the manufacture of finished products from materials supplied by the three other plants. Major products of Fuji Iron & Steel are as follows: Pig iron including foundry pig iron, special steel pig iron and ordinary steel pig iron, ordinary steel ingots; semifinished products including blooms, billets, slabs and sheetbars; steel products such as bars, shapes, rails, wire-rods, plates, medium plates, floor plates, hot and cold-rolled strip and sheest, galvanized iron sheets, hoops, panzermasts; chemical products including benzol products, coaltar and its distillates, tar acid, sulphuric acid, ammonium sulphate, etc.

In the total sales of the Company for the recent half-year term (October, 1956 to March, 1957), pig iron accounted for 16.5%, semi-finished products 13.6%, steel products 66.8% and chemicals, 3.1%., thus indicating that steel products constitute the pillar of the Company's income. The production capacity of the Company has been doubled since its inception. In detail, the blast furnace capacity (for pig iron) leaped from 900,000 tons annually in April, 1950 to 1,810,000 tons as of September 30, 1956, while the open-hearth furnace capacity (for steel manufacturing) increased from 870,000 tons to 1,590,000 tons in the interim. Rolling equipments jumped from 720,000 tons to 1,840,000 tons. The production during the half-year term from April to September, 1956 stood as follows: pig iron, 918,000 tons; steel ingots, 1,618,000 tons; semi-finished products, 1,012,000 tons; steel products, 618,000 tons. The breakdown of the production of finished products was as follows: heavy rails, 40,000 tons; light rails, 2,000 tons; large shapes, 32,000 tons; medium shapes, 50,000 tons; small shapes, 80,000 tons; wire-rods, 70,000 tons; plates, 166,000 tons; medium plates, 26,000 tons; blacksheets, 26,000 tons; hoops, 46,000 tons; hot and cold rolled strip and sheets, 80,000 tons. The production of chemicals was divided into 48,000 tons of tar distillates, 11,000 tons of benzol items and 11,000 tons of ammonium sulphate.

As one of the biggest steel manufacturers in this country, Fuji Iron & Steel takes large percentages of national total outputs in major items. In calendar 1956, the rankings of the Company's key products were as follows: heavy rails, 2nd in Japan (accounting for 23.5% of the national total); light rails, 2nd (19.0%); large shapes, 2nd (19.0%); medium shapes, 2nd (16.8%), large bars, 3rd (12.4%); medium bars, 1st (17.3%); small bars, 1st (11.4%), ordinary wire-rods, 2nd (20.7%); special wire-rods, 4th (8.7%); plates, 4th (16.8%); medium plates, 1st (20.5%); hot-rolled blacksheets, 4th (7.4%); hoops, 3rd (11.8%); cold-rolled wide hoops, 2nd (32.0%); cold-rolled plates, 2nd (33.5%).

The Company has inducted foreign techniques for the manufacture of blacksheets and panzermasts. For the production of hot and cold strip and sheets, the Company has been obtaining technical aid and suggestion through a tieup contract concluded in 1951 with Armco International Corporation (U. S.) while it is getting technical advices from a Swiss engineer under a contract signed in 1955 for the manufacture of panzermasts.

Under a long-range rationalization plan started in 1951, the Company succeeded in streamlining its equipments by 1955 with the object of diversifying products, elevating quality of manufactures and cutting costs through mass production. In order to further improve equipments, the Company is now undertaking the 2nd rationalization program. The major points of the second rationalization plan are as follows: 1) A hot-strip mill is now under construction at Muroran Iron Works at the total expense of ¥7,800 million with the completion due in September, 1957. Upon the completion, the new mill will operate at the monthly capacity of 35,000–40,000 tons. Blast furnaces, coke ovens, steel manufacturing equipments and soaking pits are also being repaired and reconstructed side by side with the streamlining of equipments for the chemical department. 2) At Kamaishi, a large-shape mill, recently completed, is being further modernized and a coke oven is being revamped. A set of soaking pits will also be erected and silicon-steel sheet equipments are getting ready for operation. 3) At Hirohata, an electrolytic tinning line is now under construction at the total cost of ¥2,100 million with the completion scheduled for December, 1957. Upon completion, the new mill will operate at the monthly capacity of 8,000 tons (together with another hotdipped tinplate mill already in operation). The rationalization program at Kamaishi also includes the repairing of blast furnaces and coke ovens, the expansion of steel mills, the revamping of soaking pits and the construction of a new (No. 3) blast furnace (with the daily capacity of 1,500 tons). 4) At Kawasaki, processing equipments for panzermasts and cold-forming mills are being improved and expanded.

During the half-year period (October, 1956–March, 1957), the sales of the Company totalled ¥52,361 million, far exceeding the sales in the preceding term at ¥45,816 million. For the same term, the sales volume reached 1,110,000 tons, up 30,000 tons over the preceding half-year term. During the period under review, exports dwindled markedly but the sharp gain in domestic shipments more than offset the loss in overseas sales. The declared profits for the term totalled ¥3,013 million, a marked gain of ¥983 million over the preceding term, and a 12% dividend was continued without difficulty.

Investment Opportunities in Japan.

DAIWA SECURITIES CO., LTD.

Fast growing industries and liberal rules for repatriation of principal and income make Japanese securities an attractive investment for Foreign investors.

HEAD OFFICE:
8, 2-chome Otemachi,
Chiyoda Ward,
Tokyo, Japan

CABLES: FUBILL

Tel: 23) (611

Mitsubishi Shoji

Mitsubishi Shoji (capitalized at ¥5,000 million) now in existence is the successor to the giant trading company bearing this well-known name which matched Mitsui Bussan in Japan's foreign trade transactions before the war. Mitsubishi Shoji, as it is today, was organized in 1952. The Old Mitsubishi Shoji was dissolved in 1947 by order of GHQ as part of its policy for the dissolution of the Zaibatsu in this country. After the dissolution, several second companies were created by the former officials of the dissolved trading firm. These second companies were later reorganized into larger concerns until they were mostly absorbed in April, 1952 the "Big 3" subsidiaries—Fuji Shoji (capitalized at ¥230 million), Tokyo Boeki (¥170 million) and Tozai Koeki (¥150 million). In the interim, the defunct Mitsubishi Shoji was in the process of liquidation. With liquidation within a short period apparently difficult, part of the businessess by the dissolved concern (principally real estate, warehousing, transportation and insurance agency) was separated and placed under charge of a new company created in 1950 under the name of Kowa Jitsugyo to handle assets and liabilities transferred from the defunct firm. This company returned to the traditional name of Mitsu bishi Shoji in August, 1952. With this new Mitsubishi Shoji as the pivot, the three other companies (Fuji Shoji, Tokyo Boeki and Tozai Boeki) got together to make a fresh start as Mitsubishi Shoji today in July, 1954. At the time of its inception in 1954, the Company was capitalized at ¥650 million, but later swelled into the present ¥5,000 million concern through two successive capital expansions. Thus, through the 1954 merger, this company has become the largest "coordinated" trading concern in this country. During the half-year period from October, 1956 to March, this year, the Company handled businesses worth ¥202,900 million, far exceeding the second-ranking Marubeni-Iida (with the head office in Osaka) by about ¥26,000 million. Daiichi Bussan, as the "coordinated" trading firm representing the subsidiaries of the defunct Mitsui Bussan, placed third for the period with transactions totalling ¥169,200 million. In its business transactions, Mitsubishi Shoji has come to place heavier stress on export-import trading. Of the total transactions worth ¥202,900 million handled during the half-year term under review, imports accounted for ¥78,000 million or 38.4%. Increases in imports during the period were particularly notable for fuels, iron-steel raw materials, nonferrous metal ores and raw cotton. On the other hand, import transactions through this company have been more or less stalemated, although its overseas sales of machinery (mostly steel ships) have continued active. Well reflective of active equipment and inventory investments within the country, domestic transactions have come to get a heavier weight in the Company's businesses in recent years.

It goes without saying that Mitsubishi Shoji has grown into the largest of Japanese commercial houses through the integration of a wide variety of business lines of the key firms which emanated from the dissolved Mitsubishi Shoji and were later emerged into the present concern. Also responsible for the energetic advance of the Company is the strong backing by the leading companies, both industrial and financial, which belonged to the former Mitsubishi Zaibatsu. In the financial field, the Company is receiving an overall support from the Mitsubishi Bank, Ltd. In the industrial phase, it is very closely related with the former Mitsubishi-Zaibatsu subsidiaries such as Mitsubishi Nippon Heavy Industries (capitalized at ¥3,000 million); Shin Mitsubishi Jukogyo (¥5,600 million), Mitsubishi Shipbuilding & Engineering (¥5,600 million), etc. Also in support of Mitsubishi Shoji's activities are other able members of the Mitsubishi family like Mitsubishi Electric Manufacturing (¥3,600 million); Mitsubishi Oil (¥2,400 million); Mitsubishi Metal Mining (¥2,100 million); Mitsubishi Mining (¥1,800 million); Mitsubishi Steel Mfg. (¥400 million); Mitsubishi Chemical Machinery (¥150 million); Mitsubishi Chemical (¥3,174 million); Mitsubishi Rayon (¥1,500 million); Asahi Glass (¥3,100 million); Mitsubishi Paper (¥900 million); Mitsubishi Cement (¥600 million); Mitsubishi Shipping (¥2,400 million), etc.

For the imports of raw materials required by these key industrial companies as well as the exports and domestic sales of their products, Mitsubishi Shoji is playing a very important role. These Mitsubishi-affiliated firms, all representative components in key industries in which they specialize, are by themselves closely interrelated horizontally. Such interrelations between the Company and other Mitsubishi-affiliated firms are one of the closest in Japan's business circles.

One of the nearest examples in this connection is the so-called Mitsubishi Atomic Power Commission organized by leading Mitsubishi-affiliated companies with Mitsubishi Shoji as a "secretariat." This commission is tasked with studies and researches in the ways and means for peaceful utilization of atomic power, the most important problems now cudgeling the barins of Japanese industrialists. In connection with the exports of plant-equipments, the Company has also established the technical consultant office for Southeast Asia in Calcutta with the support of other key Mitsubishi affiliates for the technical guidance of native engineers and for the acceleration of plant-equipment exports through the Mitsubishi channel.

Handling of the bulky volume of annual trade transactions by this company with sources abroad is made possible through the coordinated activities of a comprehensive network of its overseas branches which has been steadily strengthened in recent years. At present, the Company has overseas branches at Vancouver, London, Calcutta, Bangkok, Singapore, Hongkong and Taipeh. In addition, the Company has its businesses incorporated into juridical persons under the laws of several foreign countries concerned. They are: U.S.–Mitsubishi Shoji (head office in New York and branch in San Francisco with representatives stationed in Seattle, Los Angeles, Caracas & Havana); Brazil-Mitsubishi Shoji (head office in Sao Paulo with branch in Rio de Janeiro); Argentina-Mitsubishi Shoji (head office in Buenos Aires); Germany-Mitsubishi Shoji (head office in Dusseldorf and branch in Hannover); and Egypt-Mitsubishi Sholi (head office in Cairo). The Company also manages representatives' offices at Bombay, Santiago, Lina, Milano, Istanbul, Baghdad, Beirouth, Teheran, New Delhi, Madras, Karachi, Rangoon, Saigon, Jakarta, Phom Penh, Noumea, Manila, Sydney and Melbourne.

Despite the tight-money measures being adopted by the Government, the volume of transactions handled by the Company during the current six-month term due to end in September is likely to register an increase of about 10% as the backlogs of outstanding transactions still reach about ¥200,000 million. Hence, profits equal to, if not larger than, those reaped for the last term are apparently guaranteed for the current term. Reserves within the company, well topping ¥4,000 million, will also prove an additional plus to its future promise.

General Importers & Exporters

WORLD NETWORK OF BRANCHES & OFFICES

MITSUBISHI SHOJI KAISHA, LTD.

MITSUBISHI SHOJI BLDG., 10 MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKY
(REGISTERED HEAD OFFICE: 1 ODENMACHO 2-CHOME, NIHONBASHI, CHUO-KU, TOKY

Labor

Season for Labor Union Meetings:—*Tanro* (Coal Miners Union, membership, 200,000), one of the most leftist labor unions in Japan, held its 17th regular meeting from May 13 through 19 and decided upon its 1957 principles concerning activities in the coming term including its demands for fat summer bonuses. The meeting also decided that *Tanro* would give its full support to the National Railways Workers Union, which is currently fighting against the authorities' decision to purge the union of its leftist elements. However, the meeting seemed to lack the usual punch which has long been the characteristic of the sinewy coal miners, possibly because of the union ists' complacency about their "victory" in the spring wage boost fights. The highlight of the meeting had been how the union would face the managements' demands for 53,000,000 tons of coal for 1957. It was finally decided that, to avoid any sacrifice on the part of the unionists due to the stepped-up production, the union would try to take initiative in the production plans. This is close to deciding on production control by labor.

As for the authorities' purging the National Railways Workers Union of those who led the spring strikes, the Coal Miners Union decided to give full support to the fighting Railways Unionists. The Union also pledged to swing its weight on the back of "keep-the-commodity-prices-down" movement which is coming into force among the general public. As an initial step, the Union would try to persuade the coal mine managements not to raise the prices of coal and coal products. However this is expected to come to nothing, as the managements are now in a "raise-coal-prices-or-bust" situation by the unusually high standards of wages they had to accept as a result of the spring labor offensive. As for the summer bonuses, the Union meeting revised the original demand for 0.8 month amount and upped the new demand to a full month's pay.

Close on the heels of Coal Miners Union Meeting, Japan Locomotive Workers Union (membership, 55,000) held its 7th regular meeting from May 21 through 23. Main interest was centered on how the Locomotive Workers Union, rather mild organization among its Sohyo sister unions, would react to the first purges it suffered in its history. The meeting, true to its influential ally the National Railways Workers Union, elected the purged officials to their former positions (this is illegal, but many of the Government employees unions had so far ignored the law) and decided to go on strike during the month of June in three waves to demand the depurge of the ousted officials. Characteristic of this mild organization, however, there was considerable criticism among its very members about the propriety of electing the former officials who were legally out of the union now to their former positions.

Thus the question of "illegal unions" (illegal in the sense that the purged officials are still in their former positions) is bound to come up in the near future.

The 15th regular meeting of *Nikkyoso* (Japan Teachers Union, membership 500,000) was held on June 5 through 8. The complete strategical about-face of *Nikkoyso* from its usual stand for higher wages to "building up true spirit of education" was a rather pleasant surprise to many innocent people. But to those who are in on it, the about-face was only a logical conclusion that the Teachers Union had reached after its careful study of its standing. For example, the total outlay on the part of the parents for their children in primary, junior, and senior high schools has now grown to a huge 200 billion yen, while the PTA burden alone costs the poor parents about 40 billion yen a year. The Teachers Union wisely concluded that the problem of higher wages was about the most dangerous bomb in their basket now. Parents are too much sponged upon now to condone any suggestions of raising of wages. So the union headquarters put up an apparently innocent slogan of "building up true spirit of education" in front of them and decided to wait for a better chance to bring about their demands for higher wages.

However, the rank and file of *Nikkyoso* were too domestic to accept such a high-sounding slogan and the meeting finally fell back on the usual demand for higher wages.

With these activities of member unions as a background, *Sohyo* (General Council of Japanese Trade Unions), by far the most powerful federation of labor unions in Japan, held its special meeting on May 30 through 31. In that meeting, it was decided that the purges inflicted upon the leaders of spring strikes in such Government enterprises and public corporations as Railways Workers Union were unpardonable pressure upon the laboring class and that *Sohyo* would fight to the end to make the Government to lift the "unilateral" bans.

In detail, *Sohyo* would weave the "depurge" demands into the economic struggles such as summer allowance demands and higher wage demands expected in iron & steel and shipbuilding industries in the coming autumn. Strikes would also hit railway depots, especially those depots which handle transportation of important raw materials. However, the steps of the member unions are not always in tune.

Punishments to Railway Union Leaders:—As was reported here in the June issue, the authorities dealt a rather severe blow to those leaders in the Railways Union who brought about the spring labor offensives. Not content with the dealings, the Railways Union resorted to another protest strike on May 11 through 12. The authorities, equally adamant, dished out on June 3 another series of discharges against the leaders of the protest strikes. Close on the heels of the discharge announcement, the National Railways Union and the Japan Locomotive Engineers Union went on the second series of protest strikes in some parts of the country. The disturbances were not so overwhelming as those on the previous occasions but in such radical areas as Okayama and Hiroshima the strikes crippled the main railroad lines one after another.

The Government, on the other hand, reaffirmed on June 7 that "it was a flagrant violation of law for the unions to keep the discharged leaders in the important union positions."

Following is in tabulated form the details of the two series of the protest strikes.

National Railways Uuion	No. of Strike Cases: 496. No. of "On-duty" Employees: 51,838 No. of Employees Participated in Protest Rallies: 37,816 Average per capita Work-hours Lost: 3 hours. Bad Effects Continued for: 4-8 days. No. of Trains Cancelled: Passenger Trains: 109 Freight Trains: 83 No. of Delayed Trains: Passenger Trains: 85 (1,915 minutes in total) Freight Trains: 62 (2,347 minutes in total)
Locomotive Engineers Union	No. of Sirike Cases: 115 No. of "On-duty" Workers: 3,751 No. of Employees Participated in Protest Rallies: 2,218. Average per capita Work-hours Lost: 20 minutes

Book Review

Nippon Kindai Seitetsu Gijutsu Hattatsu Shi (*Development of Modern Steel Manufacturing Technique in Japan*) (*in Japanese*)····*How Yawata Iron & Steel Was Established? Edited by Hiroto Saigusa and Kanichi Iida. Toyo Keizai Shinpo Sha, Nihonbashi, Tokyo, 1957. pp. 752. ¥2,200.*

How did Japan emerge as one of the foremost steel manufacturing nations of the world in a short period of less than a century after she was initiated to what is generally termed "Western civilization"? Japan today ranks among the six major steel manufacturing countries of the world, well vying with the U.S., USSR, Britain, W. Germany and France. How and why? This book gives the answer. It took a century, be it emphasized, for Japan to promote her steel industry to this level. In 1857, her first modern blast furnace (still using charcoal) was built at Kamaishi, Iwate Prefecture, in Tohoku Region. This was the origin of the Kamaishi Steel Factory of Fuji Iron & Steel Co., the second largest steel manufacturer in Japan.

The solid foundation of Japan's steel industry, however, was laid when the Yawata Iron & Steel Factory was inaugurated as a governmental enterprise in 1896 just after the Sino-Japanese War. It started operation in 1901 in Fukuoka Prefecture, North Kyushu. Initially its production goal was placed at 60,000 tons, but it has since been continually expanded.

This government factory became the Yawata factory of the semi-government Nippon Iron & Steel Co. incorporated into the new organization with some private steel companies. Its management became entirely on a private basis after the Pacific war. The former government factory is now the principal factory of Japan's largest Yawata Iron & Steel Co.

The history of this gigantic steel firm particularly its technological achievements, in the past ten decades is the main theme of this voluminous work. The volume falls into four parts. Part I deals with about 30 years from the late Tokugawa Shogunate and the inauguration of the Yawata Iron & Steel Factory. The 30 years forms the dawn of Japan's modern steel industry. Part II describes the period between the enactment of the Yawata Factory Regulations and the outbreak of the Russo-Japanese War. It is this period that the Yawata Iron & Steel Factory finally began its operation. Part III gives an account of the period from the Russo-Japanese War to the beginning of World War I. In this period, the foundation of the Yawata Iron & Steel Factory was laid, thereby establishing a solid basis for the development of Japan's modern steel industry. The final part treats the fourty-odd years since World War I through the Pacific War to the present day.

Two features are notable in this book. One is that the inside source materials of the Yawata Iron & Steel Co. were utilized by the editors to be published for the first time. The other is that the volume analyses and explains the development of Japan's steel industry, from not only the economic but also technological standpoint. Hitherto few books have been written in this fashion. Whereas Japanese historians interested in economy and industry have tended to take little account of technological developments, others interested in technology have often lost the economic perspective.

The editors of this book have successfully tied up both economic-industrial and technological aspects to achieve a vivid description of the development of Japan's steel industry. Their remarkable work is a great contribution to those who study Japan's industrial history and the development of her steel industry. (*Y.T.*)

Historical Stories of Christianity in Japan. *by Junichi Natori Hokuseido Press, Tokyo, 1957. 222 pp. With four colored plates. ¥300.*

A popular presentation of the introduction of Christianity into Japan in three parts: I. Ancient Times; II. Mediaeval Times; III. Modern Times. A short bibliography and an index.

As the author states in the preface, "the book is not a detailed account of Christianity in Japan, but rather a collection of short historical stories which (he hopes) will help in the recounting of the History of Christianity in Japan". Part I is to show the contact of Japan with Nestorianism via China which, however, did not bring about the establishment of a mission in this country. Part II outlines the missionary activity of St. Francis Xavier and the Society of Jesus from the mid-16th to about the mid-17th century. Although their mission flourished for nearly one hundred years, Christianity was, nevertheless, almost completely wiped out by the onslaught of a most violent persecution. Only when Commodore Perry forced Japan to open herself to foreign intercourse (1854) could missionary work be resumed and continued to this day. Not only Roman Catholics, but missionaries of the Russian Orthodox Church, of the Episcopalians of England and the U.S. as well as a great many Protestant denominations have since been devoting themselves to the Christianization of Japan.

Prof. Natori believes that it was good luck for his country that it did not receive the "imperfect Nestorian teaching." He is also inclined to see a kind Providence in the failure of the Jesuit missions. If Christianity had aroused the suspicion of the Japanese in the 16th and 17th centuries, this suspicion (the author believes) has now become groundless, because "by this time most of the sharp corners had been rounded off that religion." "In two hundred years a more Christlike atmosphere had been evolved from the influence of the Reformation" (p. 103). Prof. Natori considers it also an advantage that various forms of Christianity are now being offered to the Japanese so that they may choose what appeals most to them. One may rightly question whether the Protestant Reformation is responsible for "a more Christlike atmosphere," since it is a well-known fact Protestant England violently persecuted Catholics for more than 200 years and Denmark, Norway and Sweden would not allow Catholics to live in their countries until about the mid-19th century. If the great variety of Christian denominations is said to be an advantage, it is hard to see why just in this country various attempts have been made for an amalgamation of them into one Church or, at all events, into a federation with a common basic Creed.

Although it is gratefully acknowledged that the author pays high tribute to the devoted work of Catholic missionaries, particularly their charities, it is, nevertheless, most regrettable that he has not entirely freed himself of some of the prejudices of many Protestants concerning Catholic doctrine and practice. It is no longer considered scientific to speak "of the sale of indulgences, Masses, charms" and the like, since such assertions have long ago been relegated to the world of fables by conscientious scholars. As Prof. Natori is (avowedly) deeply concerned about the Christianization of his country, it would serve his purpose much better if he had abstained from such unwarranted criticisms.

Attention must be called also to a number of historical errors of which we shall mention only a few: William Adams arrived in Japan in 1600 and not in 1598; Father Sidotti was not a Jesuit but a secular priest; Valignano was dispatched as ambassador by the Viceroy of India and not by the Governor of the Philippines. The bibliography is limited to works in English, whereas the most important works on the early Catholic missions in Japan are in French and Spanish. One of the most scholarly English works on this subject, C. R. Boxer's *The Christian Century in Japan* (Berkeley, 1951) is not included. (*J. Laures*)

1. Business Indices

Items	Units & Standards	1954 Average	1955 Average	1956 Average	1956 Dec.	1957 Jan.	1957 Feb.	1957 Mar.	1957 Apr.	1957 May	1956 May
Finance & Banking											
Treasury Acct. with the Public (6)	Fiscal Year · ¥100,000,000	(–)1,900	(–)2,766	1,634	(–) 870	1,409	958	246	(–) 205	936	454
Bank of Japan Accounts (1) End of Year or Month											
Bank Note Issue	¥100,000,000	6,220	6,738	7,848	7,848	6,764	6,586	6,662	6,837	6,390	5,614
Loans Total	,,	2,433	319	1,399	1,399	1,660	2,415	2,763	2,726	3,243	229
Foreign Exchange Loans	,,	218	127	30	30	28	22	15	14	7	86
Government Bonds	,,	4,835	5,536	5,867	5,867	4,515	3,439	5,099	3,610	2,997	5,083
Postal Savings and Postal Transfer Savings (2) End of Year or Month	,,	4,363	5,166	6,327	6,327	6,542	6,579	..	..	..	5,377
All Banks Account (1) End of Year or Month											
Deposits	,,	30,366	37,243	47,642	47,642	46,812	47,021	49,719	48,988	49,575	39,378
Loans	,,	29,119	31,958	40,661	40,661	40,835	41,575	43,012	43,277	43,903	32,902
Stocks											
Average Share Price (Tokyo Stock Exchange) (3)											
Dow Jones	Yen	340.79	374.00	485.33	553.89	572.80	573.99	567.73	587.55	547.58	480.56
Simple Arithmetic Means	,,	110.94	108.17	126.43	124.34	125.99	126.10	124.38	127.36	118.00	132.29
Tokyo Stock Exchange (3)											
Total Turnovers	Million Stock	1,238	2,505	6,692	669	978	751	711	820	775	609
Investment Yields	%	9.44	7.96	6.68	6.77	6.47	6.44	6.37	6.42	7.17	6.38
Prices											
Bank of Japan Wholesale Price Indices (1)											
Total Average	1934–36=100	34,920.8	34,293.1	35,793.8	37,276.9	37,382.0	37,347.0	37,347.0	37,213.0	..	35,490.2
Total Average	1952=100	99.7	97.9	102.2	106.4	106.7	106.6	106.6	106.5	106.0	101.3
Producer Goods	,,	96.7	95.1	104.0	108.7	109.3	109.6	109.6	109.9	109.4	103.1
Consumer Goods	,,	103.6	101.6	99.7	103.4	103.3	102.7	102.6	202.2	101.5	99.0
Consumers Price Indices (4)											
All City Average	1951=100	119.1	117.8	118.4	120.1	121.3	121.5	122.4	122.6	..	118.1
Tokyo	,,	118.1	116.4	117.5	118.9	119.8	119.4	120.6	120.7	121.8	118.6
Tokyo Retail Price Indices (1)	1952=100	106.9	102.4	102.1	101.5	102.3	102.4	104.1	105.3	105.7	101.6
Tokyo Living Cost Indices (5)	1946=100	850.2	847.4	832.3	827.4	847.0	860.3	868.9	879.1	883.8	830.5
Foreign Trade Price Indices (6)											
Exports	July, 1949–June, 1955=100	123.0	123.5	128.9	131.8	130.9	130.5	129.9	129.8	..	128.9
Imports		105.7	106.5	104.5	106.4	107.3	107.4	107.1	106.7	..	104.0
Foreign Trade											
Exports & Imports (6)											
Exports	Million Dollars	1,629	2,011	2,501	272	169	213	274	225	237	195
Imports	,,	2,399	2,471	3,230	319	323	344	393	433	451	272
Balance	,,	(–) 770	(–) 461	(–) 729	(–) 47	(–) 159	(–) 131	(–) 119	(–) 208	(–) 214	(–) 77
Foreign Trade Volume Indices (6)											
Exports	1953=100	133.3	174.1	207.9	265.1	165.0	212.6	267.9	..	..	222.6
Imports	,,	103.6	108.9	138.3	156.8	160.9	168.9	183.9	..	..	133.6
Foreign Exchange Accounts (1)											
Total Receipts	Million Dollars	2,309	2,668	3,225	286	285	277	300	298	310	245
Total Expenditure	,,	2,209	2,174	2,931	274	299	340	354	355	407	217
Balance	,,	100	494	293	12	(–) 14	(–) 63	(–) 54	(–) 57	(–) 97	28
Foreign Currencies Holdings (6)*	,,	1,053.6	1,316.7	1,421.1	1,421.1	1,359.6	1,284.4	1,192.1	..	..	1,416.8
Production & Inventories											
Industrial Activities Indices (7)											
Whole Industries	1934–36=100	173.5	187.9	227.4	249.1	226.9	242.1	253.7	254.8	..	219.4
Mining & Manufacturing	,,	166.9	180.7	219.1	239.7	217.7	233.4	244.7	245.7	..	211.2
Manufacturing	,,	173.8	189.4	231.3	252.9	229.4	246.7	259.9	259.8	..	222.8
Producer Delivery Indices (8)											
Mining & Manufacturing	1950=100	172.6	188.1	226.2	253.7	236.2	252.2	262.1	264.7	..	217.3
Manufacturing	,,	181.8	198.2	240.0	269.2	250.0	268.4	279.7	282.8	..	232.1
Raw Material Inventories Indices (8)	,,	165.7	155.3	190.7	216.3	218.7	222.3	234.7	258.1	..	163.6
Producers Good Inventories Indices (8)											
Mining Manufacturing	,,	155.5	144.4	134.4	141.7	143.0	144.1	143.0	149.6	..	127.5
Manufacturing	,,	158.9	148.6	144.0	152.6	154.8	155.9	154.9	161.7	..	137.0
Sellers Inventories Indices (8)	22 items surveyed	109.2	113.6	128.2	136.2	136.6	139.5	141.7	..	..	113.8
Warehouse Inventories Indices (8 Biggest Cities) (9)	1950=100										
Volume	1,000 tons	1,699	2,055	2,807	2,807	2,588	..	..	..	..	2,143
Value	¥100,000,000	108,482	131,606	179,027	179,027	176,035	..	..	..	..	133,027
Railroad Carloadings Indices (10)	1941=100	105.6	105.9	113.4	110.3	120.5	121.2	111.7	119.0	..	109.7
All Japan Department Sales Indices (8)	,,	22,193.7	23,668.9	28,867.2	70,340.7	23,049.0	23,543.2	34,759.0	31,983.3	..	26,251.0
Labor, Household Budget											
Employment Indices (Regular Employees) (11)											
All Industries	1951=100	111.4	110.0	113.3	115.2	115.1	115.5	117.0	120.8	..	113.5
Manufacturing	,,	113.0	111.5	116.1	118.7	118.7	119.2	121.2	126.9	..	116.4
Employment Total (4)	10,000	4,014	4,150	4,228	4,177	4,033	4,067	4,230	4,332	..	42,420
Total Unemployment (4)	,,	58	68	64	56	57	61	82	59	..	70
Regular Employee Cash Wage Total (11)											
All Industries	Monthly · yen	17,898	18,624	20,201	37,248	18,332	17,623	18,824	18,765	..	17,489
Manufacturing	,,	16,309	16,717	18,348	33,407	16,652	16,433	16,039	16,654	..	15,925
Regular Employees Real Wage Indices (11)											
All Industries	1951=100	125.5	134.3	145.9	265.4	129.2	124.0	131.5	130.8	..	125.5
Manufacturing	,,	119.3	126.7	139.7	251.0	123.8	122.0	118.1	122.8	..	120.6
Wage Earners Household Budget (All Cities) (4)											
Income	Monthly · yen	28,283	29,169	30,776	58,445	26,122	26,106	29,030	28,488	..	27,521
Expenditure	,,	26,428	26,786	27,543	45,019	25,328	24,167	28,287	26,601	..	25,795
Wage Earners Household Budget (Tokyo) (4)											
Income	,,	33,701	34,845	36,122	68,935	30,012	30,148	34,092	33,603	..	32,679
Expenditure	,,	31,450	32,388	32,603	52,749	29,707	28,715	33,165	30,888	..	30,688
Consumer Standards (7)											
All Japan	1951=100	123.7	127.8	135.2	197.0	132.8	132.7	136.6	..	..	131.9
All Cities	,,	128.5	134.9	145.1	216.4	132.0	139.6	143.8	146.5	..	141.9
Farm Area	,,	116.5	117.1	120.4	167.9	134.1	122.3	125.7	..	..	123.5

Sources: (1) Bank of Japan. (2) Ministry of Postal Services. (3) Tokyo Stock Exchange. (4) Statistics Bureau, Prime Minister's Office. (5) The Oriental Economist. (6) Finance Ministry. (7) Economic Planning Board. (8) MITI. (9) Transportation Ministry. (10) Japanese National Railway. (11) Labor Ministry. Notes: * End of Year or Month.

2. Treasury Accounts with the Public

(In ¥100,000,000) (Ministry of Finance.)

Items	Fiscal 1956								Fiscal 1957		Fiscal 1956
	Apr.–June	July–Sept.	Oct.–Dec.	Jan. 1957	Feb. 1957	Mar. 1957	Jan.–Mar.	Total	Apr.	May	May
General Account											
Revenue											
Taxes	2,002	2,216	2,383	843	721	1,052	2,616	9,217	662	653	563
Monopoly	336	255	155	56	85	113	254	1,000	122	136	123
Others	163	97	150	26	30	78	134	546	86	34	65
Total	2,501	2,570	2,688	925	836	1,243	3,004	10,763	830	823	751
Expenditure											
Security Forces	118	108	129	84	16	56	156	511	103	28	18
Defense Agency	267	158	250	49	66	82	197	872	148	110	49
Public Works Expenditure	340	250	446	27	52	183	262	1,298	163	62	93
Local Finance Equalization Grants	748	460	416	41	—	217	258	1,882	449	0	0
Compulsory Education Expenditure	191	166	238	107	2	49	158	753	63	152	139
Others	925	698	1,053	186	247	337	770	3,446	452	259	237
Total	2,689	1,840	2,532	494	383	924	1,801	8,762	1,378	611	536
Balance	(↔) 88	730	156	431	453	319	1,203	2,001	(↔) 548	212	251
Special Accounts and Others											
Foodstuff Control	580	(↔) 401	(↔) 1,024	308	258	278	844	(↔) 1	379	350	238
Trust Fund Bureau	(↔) 200	(↔) 82	(↔) 283	(↔) 16	(↔) 4	(↔) 407	(↔) 427	(↔) 992	(↔) 70	(↔) 95	(↔) 113
Industrial Investment	28	43	(↔) 22	(↔) 13	—	66	53	102	(↔) 69	(↔) 18	20
National Railways and Nippon Telegraph & Tel. Public Corporation	147	(↔) 16	(↔) 120	121	2	(↔) 142	(↔) 19	(↔) 8	(↔) 30	16	132
Finance Corporation	(↔) 157	(↔) 176	(↔) 280	(↔) 55	(↔) 58	(↔) 108	(↔) 221	(↔) 834	(↔) 73	(↔) 68	(↔) 50
Others	(↔) 28	267	(↔) 121	310	151	78	539	899	(↔) 138	81	38
Total	370	(↔) 365	(↔) 1,608	655	349	(↔) 235	769	(↔) 834	(↔) 1	266	265
Adjustment Items	(↔) 94	(↔) 1	49	94	(↔) 68	(↔) 147	(↔) 121	(↔) 167	30	(↔) 18	(↔) 41
Foreign Exchange	(↔) 94	(↔) 21	(↔) 13	229	224	309	762	634	314	476	15
Balance	94	343	(↔) 1,416	1,409	958	246	2,613	1,634	(↔) 205	936	454

3. Monthly Report of All Banks

(March, 1957: Excluding Bank of Japan)

(In million yen) (Bank of Japan)

	All Banks							Trust Account (17)
	Debenture Issuing Banks (2)	City Banks (13)	Local Banks (55)	Trust Banks (6)	Total (86)	Leftover from Pre. mo.	Month-end, previous year	
Deposits								
Current Deposits	14,954	843,991	162,330	46,973	1,068,246	927,868	762,989	—
Ordinary Deposits	8,263	577,117	349,794	19,293	954,468	925,471	792,177	—
Deposits at Notice	22,329	240,954	61,133	27,341	351,759	298,445	285,314	—
Time Deposits	10,582	1,337,843	747,972	39,034	2,135,431	2,088,641	1,649,583	—
Special Deposits	3,821	129,032	42,315	6,350	181,520	185,403	153,741	—
Instalment Savings	—	36,193	100,128	469	136,791	135,500	126,999	—
Deposits for Tax Payment	131	6,847	2,732	370	10,082	8,103	7,460	—
Deposits of Gov't and Gov't Agencies	1,350	131,536	—	—	132,886	131,902	114,201	* 169,200
Other Deposits	—	732	—	—	732	853	516	** 168,233
Total	61,429	3,354,247	1,466,407	139,833	4,671,918	4,702,191	3,892,994	—
Borrowed Money	16,216	268,113	3,576	6,075	593,982	283,564	92,016	—
Borrowings for Settlement of Import Bills	892	59,575	110	1,045	61,623	58,287	1,320	—
Call Money	1,562	109,736	8,337	9,374	129,009	141,264	80,679	—
Cash and Deposits								
Cash in Hand	16,776	687,206	117,992	28,806	850,782	726,372	595,271	5,629
Deposits with Domestic Money Organs	240	9,006	21,740	2,493	33,480	26,071	50,123	1,947
Call Loans	6,717	17,707	30,917	1,664	57,006	56,556	48,912	17,968
Securities								
Government Bonds	1,741	38,483	11,255	840	52,321	52,059	52,323	83
Local Government Bonds	2,427	29,896	30,235	361	62,921	59,444	34,071	1,607
Foreign Bonds	—	2,499	—	—	2,499	2,518	2,362	3
Corporate Debentures	9,473	223,373	186,471	5,892	425,211	456,266	387,376	4,900
Stocks	10,775	68,483	23,416	4,299	106,975	105,540	66,786	2,509
Other Bonds	314	280	1,177	1,502	3,274	3,144	1,764	23
Total	24,732	363,017	252,557	12,897	653,203	678,973	544,684	9,128
Advance								
Discount Bills	12,541	992,103	326,412	70,017	1,411,074	1,344,872	1,079,682	17,117
Bank Acceptance Bills	—	1,564	10,159	386	11,813	11,942	13,237	—
Commercial Bills	12,541	989,772	324,674	69,623	1,396,611	1,330,376	1,063,692	—
Documentary Bills	—	1,066	1,578	4	2,649	2,553	2,751	—
Advances against Guarantee	387,949	1,516,433	832,347	60,500	2,797,231	2,723,341	2,122,492	289,668
Loans on Bills	66,456	1,461,220	782,170	59,227	2,369,074	2,299,920	1,785,779	98,534
Loans on Deeds	321,493	18,881	38,255	970	379,601	369,949	308,440	54,534
Overdrafts	—	36,330	11,921	302	48,554	53,471	28,272	—
Loans for Settlement of Import Bills	1,266	88,501	1,495	1,681	92,944	89,377	56,254	—
Total	401,757	2,597,038	1,170,255	132,199	4,301,251	4,157,591	3,258,429	306,786

Note: * Money in trust total. ** Loan trust.

4. Bank of Japan Ten-day Report

(In million yen)

(Bank of Japan)

Items	1957			1956
	May 10	May 20	May 31	May 31
LIABILITIES				
Bank Notes Issued	605,397	592,771	639,097	561,421
Bankers' Deposits	5,150	7,621	8,522	7,991
Government Deposits	45,291	49,567	53,722	86,369
Other Deposits	29,038	28,670	26,858	28,047
Inter-Bank Remittance Deposits	—	—	—	—
Reserves Against Contingencies	31,208	31,208	31,208	26,908
Other Liabilities	47,404	45,803	40,980	39,490
Capital Stock	100	100	100	100
Reserve Funds	15,236	16,373	16,373	14,286
Total	778,827	772,116	816,864	764,614
ASSETS				
Bullion	447	447	447	447
Cash	3,624	3,695	3,843	3,725
Discounted Bills	36,023	37,963	37,403	4,765
Loans	221,251	237,973	286,902	18,225
Foreign Exchange Loans	1,493	763	763	8,662
Advances to Government	—	—	—	—
Government Bonds	320,504	295,271	299,770	508,329
Foreign Ex. Accounts	153,445	163,541	141,011	176,808
Inter-Bank Remittance	—	—	—	—
Agencies Accounts	7,005	8,254	11,539	7,592
Other Assets	35,031	34,205	35,182	36,056
Total	778,827	772,116	816,864	764,614

5. Outstanding Loans to Industries by All Banks

(In million yen)

(Bank of Japan)

End of Month	January, 1957			February, 1957		
	Loans Total	For Equipments	For Co. of ¥10 Million or less	Loans Total	For Equipments	For Co. of ¥10 Million or less
Manufacturing total	1,898,752	198,120	67592,2	1,931,077	208,175	594,228
Foodstuffs	197,053	10,193	103,682	198,796	10,545	102,937
Textiles	428,941	39,668	162,835	429,801	40,733	162,738
Wood and Wood Products	74,461	1,724	62,628	75,257	1,809	63,338
Paper & Related Products	108,081	14,937	19,965	111,289	16,600	19,731
Printing & Publishing	41,452	4,691	15,930	40,780	4,664	15,851
Chemicals	229,383	37,119	32,434	237,514	40,197	32,385
Glass & Ceramics	65,574	13,675	14,532	66,639	14,010	14,761
Primary Metals	223,377	36,709	27,194	225,049	38,074	27,604
Machinery	93,423	5,299	41,828	95,243	5,423	42,753
Electric Machinery & Tools	131,981	11,616	17,245	135,692	11,852	17,001
Trans. Machinery & Tools	131,054	9,057	18,581	136,298	9,343	18,749
Agriculture	9,899	488	9,611	10,691	517	10,317
Forestry & Hunting	10,800	54	8,774	10,584	48	8,673
Fishery	50,688	16,305	18,377	51,654	16,118	18,331
Mining	96,709	17,937	13,012	94,630	17,662	12,769
Metal Mining	18,388	3,978	842	18,924	4,237	940
Coal Mining	67,272	10,784	8,991	64,580	10,691	8,652
Construction	89,585	1,117	39,615	92,719	1,193	41,000
Wholesale & Retail	1,269,190	14,691	647,133	1,297,795	15,134	657,387
Wholesale	1,159,433	8,644	567,158	1,185,244	9,009	576,258
Retail	109,756	6,047	79,974	112,550	6,124	81,129
Finance Insurance	74,960	73	10,194	70,913	82	10,134
Real Estate	27,002	9,434	12,742	27,992	10,179	12,861
Trans. & Public Utilities	318,243	218,427	24,071	326,091	223,444	23,808
Railways	31,392	13,511	189	32,056	12,999	170
Shipping	102,429	66,486	9,321	102,865	67,203	9,264
Electric	116,555	115,164	47	121,386	119,421	33
Services	77,738	20,323	54,319	78,353	20,789	54,529
Local Public Corporation	56,489	19,075	—	58,664	19,247	—
Others	52,521	2,621	52,321	52,951	2,658	52,774
Total	4,032,581	518,131	1,482,443	4,104,119	535,250	1,496,817

6. Tokyo-Osaka Call-Money and Its Rates

(Bank of Japan)

Year & Month	Tokyo			Osaka		
	Rate		Balance at the End of the Month (million yen)	Rate		Balance at the End of the Month (million yen)
	Over-Month-End (sen)	Unconditional (sen)		Over-Month-End (sen)	Unconditional (sen)	
1956: Oct.	2.05	2.10	65,529	2.10	2.00	23,961
Nov.	2.05	1.80	81,560	2.05	1.80	27,358
Dec.	2.50	2.50	67,722	2.50	2.50	23,460
1957: Jan.	2.30	2.00	70,797	2.35	2.00	25,430
Feb.	2.70	2.60	70,751	2.65	2.60	26,721
Mar.	3.00	2.90	73,750	3.10	3.00	25,057
Apr.	2.30	2.10	84,611	2.40	2.10	33,750
1956: Apr.	1.60	1.30	56,953	1.60	1.40	24,046

7. Postal Savings & Postal Transfer Savings

(In million)

(Ministry of Postal Services)

End of Month	Postal Savings			Postal Transfer Savings	Total
	Receipts	Payments	Balance		
1956: Sept.	46,704	42,238	582,615	7,828	590,453
Oct.	59,858	46,680	595,792	6,531	602,303
Nov.	46,543	42,978	599,357	7,344	606,701
Dec.	76,089	52,068	623,379	9,378	632,757
1957: Jan.	67,580	43,669	647,289	6,973	654,262
Feb.	50,905	47,295	650,900	7,098	657,998
1956: Feb.	42,993	40,379	531,873	5,849	537,722

8. Bank Clearings

(In billion yen)

(Tokyo Clearing House)

Year & Month	All Clearing		Tokyo		Osaka	
	No. of Bills	Amount	No. of Bills	Amount	No. of Bills	Amount
	(1,000)		(1,000)		(1,000)	
1956: July	12,413	3,232	5,080	1,493	2,465	770
Aug.	12,134	3,374	4,818	1,543	2,480	810
Sept.	11,520	3,457	4,628	1,591	2,346	838
Oct.	13,014	3,779	5,178	1,727	2,641	902
Nov.	12,511	3,599	4,995	1,599	2,544	872
Dec.	16,361	4,718	6,466	2,068	3,314	1,137
1957: Jan.	11,108	3,460	4,427	1,561	2,146	785
Feb.	11,966	3,619	4,763	1,633	2,437	851
Mar.	12,755	4,301	5,145	1,933	2,566	1,001
1956: Mar.	11,799	3,287	4,738	1,501	2,377	790

9. Average Yields of Debentures

(Industrial Bank of Japan)

Month	Gov't Bonds	Financial Debenture		Industrial Debenture
		Interest Bearing	Discount	
	%	%	%	%
1956: July	—	7.411	6.224	7.918
August	6.362	7.204	6.224	7.410
September	6.324	7.204	6.224	7.380
October	6.331	7.204	6.224	7.372
November	—	7.204	6.224	7.372
December	6.342	7.204	6.224	7.388
1957: January	—	7.204	6.224	7.361
February	6.362	7.204	6.224	7.375
March	6.324	7.204	6.224	7.359
1956: March	6.324	7.918	6.643	8.307

Note: ▲ Revised at source.

10. Government Bonds

(In million yen) (Bank of Japan)

End of Month	Government Bonds			Foreign Exchange Fund Bills			Food Notes			Outstanding Amounts of Corporate Debentures
	Issue	Redemption	Balance	Issue	Redemption	Balance	Issue	Redemption	Balance	
1956: November	114	1,354	410,601	43,000	49,000	130,000	187,926	162,292	299,000	839,601
December	1,016	2,977	408,640	96,037	87,000	139,037	162,141	111,074	350,067	897,744
1957: January	88	73	408,655	8,000	47,993	99,044	138,012	189,926	298,153	805,852
February	482	509	408,627	35,000	76,044	58,000	72,374	186,141	234,386	701,013
March	22,333	21,620	405,343	65,054	42,973	80,081	177,435	82,012	329,809	819,233
1956: March	631	704	425,882	39,000	5,000	145,000	186,000	151,000	210,140	881,022

11. Corporate Debentures & Public Corporation Bonds

(In million yen) (Industrial Bank of Japan)

End of Month	Corporate Debentures									Public Corporation Bonds		
	Banking Bonds			Industrial Bonds			Total					
	Issue	Redemption	Balance	Issue	Redemption	Balance	Issue	Redemption	Balance	Issue	Redemption	Balance
1956: November	16,608	12,682	404,704	11,765	3,692	274,817	28,373	16,374	679,521	6,151	270	99,764
December	18,298	13,238	409,763	12,515	2,378	284,958	30,813	15,616	694,721	3,773	0	103,537
1957: January	18,212	13,873	414,102	14,254	3,613	295,599	32,466	17,486	709,701	2,638	—	106,176
February	18,404	14,500	418,005	11,785	3,256	304,123	30,189	17,757	722,128	2,677	298	108,555
March	19,342	14,891	422,455	10,875	3,348	311,650	30,217	18,239	734,105	5,558	—	114,114
April	18,308	12,552	428,211	12,710	3,679	320,680	31,018	16,231	748,891	3,850	400	117,565
1956: April	15,375	12,733	376,744	7,148	3,077	240,922	22,523	15,810	617,666	5,557	—	79,571

12. Contracts & Investments of Mutual Life Insurance Companies

(In million yen) (Mutual Life Insurance Association)

End of Month	Mid-Month Contract Amounts	End-Month Contract Amounts	Loans Total	Call Loans	Negotiable Securities			Real Estate	Cash & Deposits	Others
					Total	Debentures	Stocks			
1956: October	96,611	2,582,864	96,611	8,558	89,704	8,461	77,539	22,851	3,914	4,060
November	107,899	2,650,714	97,540	9,813	93,225	9,490	79,996	23,400	4,223	4,706
December	113,922	2,703,213	103,497	5,205	96,548	9,770	82,879	24,149	3,921	4,828
1957: January	95,732	2,747,401	102,607	5,994	100,999	10,152	86,910	24,523	3,464	4,485
February	94,183	2,792,011	106,847	6,986	101,457	10,887	86,530	25,130	3,165	4,521
1956: February	81,965	2,203,425	90,829	5,483	61,207	5,649	54,342	20,158	3,898	3,843

13. Contracts & Investments of Loss Insurance Companies

(In million yen) (Loss Insurance Association)

End of Month	Mid-Month Contract Amounts	End-month Contract Amounts	Loans Total	Call Loans	Negotiable Securities			Real Estate	Cash & Deposits	Others
					Total	Debentures	Stocks			
1956: October	1,688,870	7,820,743	8,491	4,574	43,621	1,765	38,729	14,284	21,909	563
November	1,663,689	7,902,481	8,391	5,261	45,866	1,829	40,955	14,548	22,120	620
December	1,915,341	8,067,626	8,684	4,672	48,316	1,893	43,029	14,808	24,668	424
1957: January	1,670,552	8,192,712	8,962	4,812	51,931	1,398	46,447	14,892	22,664	659
February	1,663,309	8,343,328	9,170	5,646	52,494	1,704	46,555	14,995	23,632	697
1956: February	1,216,926	7,255,826	10,526	4,327	32,338	1,452	29,018	13,149	22,890	626

14. Stock Issue Plan & Paid-Up Capital

(In million yen) (Ministry of Finance)

Year & Month	Stock Issue Plan						Paid-Up Capital					
	Over ¥50 million		Under ¥50 million		Total		Over ¥50 million		Under ¥50 million		Total	
	No. of Effective Cases	Increase in Capital	No. of Effective Cases	Increase in Capital	No. of Effective Cases	Increase in Capital	No. of Effective Cases	Increase in Capital	No. of Effective Cases	Increase in Capital	No. of Effective Cases	Increase in Capital
1956: October	66	28,423	425	4,118	491	32,541	57	32,853	457	6,078	514	38,931
November	56	21,611	520	5,646	576	27,257	89	14,020	406	3,847	445	17,867
December	156	66,847	609	8,717	765	75,564	105	42,372	605	7,978	710	50,351
1957: January	4	876	588	6,565	592	7,441	178	77,134	866	11,340	1,047	88,475
February	8	835	409	3,650	417	4,485	2	135	302	2,522	304	2,677
March	16	4,925	522	5,397	538	20,322	—	—	473	4,322	473	4,322
April	17	6,146	443	9,764	460	15,910	12	1,122	540	10,057	552	11,181
1956: April	23	8,264	405	3,370	428	11,734	30	14,069	437	5,620	467	19,689

15. Tokyo Wholesale Price Indices

(1952=100) (Bank of Japan)

Year & Month	Total Average	Agricultural Products	Textiles	Fuels	Metal & Machinery	Building Materials	Chemical Products	Sundries	By Uses		
									Producer's Goods	Capital Goods	Consumer's Goods
1956: December	106.4	106.8	87.3	111.6	119.2	130.6	87.0	93.1	108.7	124.5	103.4
1957: January	106.7	106.5	86.6	112.9	119.0	133.1	87.7	92.8	109.3	125.7	103.3
February	106.6	105.7	86.0	112.1	118.8	135.9	88.1	93.3	109.6	126.7	102.7
March	106.6	105.8	84.2	112.4	118.6	137.8	88.3	94.2	109.6	127.1	102.6
April	106.5	106.3	84.3	110.4	117.6	138.3	88.8	94.0	109.9	127.0	102.2
May	106.6	106.5	81.8	111.9	116.5	138.8	88.8	93.8	109.4	126.9	101.5
1956: May	101.3	..	91.4	102.3	106.1	116.3	86.8	91.3	103.1	111.3	99.0

Notes: Food Notes in Table 10 do not include Korean food notes. Public Corporation Bonds are the total of National Railways Bonds and Telephone & Telegraph Corporation Bonds.

16. Tokyo Retail Price Indices

(1952=100) (Bank of Japan)

Year & Month	Total Average	Agricultural Products	Textile Products	Metal Products	Wood Products	Fuel	Miscellaneous	*Total Average	Total Average (1934-6=100)
1956: December	101.5	106.8	89.1	100.0	102.1	121.1	96.1	99.9	30,499.1
1957: January	102.3	108.2	89.0	99.6	103.7	131.9	94.7	100.1	30,739.5
February	102.4	108.0	90.0	99.2	105.0	128.7	95.2	100.5	30,769.6
March	104.1	110.8	90.2	99.1	106.5	127.8	96.1	100.9	31,280.4
April	105.3	112.9	90.4	99.2	107.2	131.6	95.8	101.2	31,641.0
May	105.7	114.2	88.8	99.1	107.2	130.5	96.2	101.1	31,761.2
1956: May	101.6	108.8	88.6	98.2	102.3	108.3	93.5	98.7	30,529.2

17. Consumer Price Indices

(1951=100) (Bureau of Statistics, Prime Minister's Office)

		Total Average	Food	Staple Food	Nonstaple Food	Clothing	Light & Fuel	Housing	Miscellaneous
All Cities	1956: November	118.5	113.0	123.9	106.2	83.4	141.3	150.6	143.7
	December	120.1	115.3	123.6	110.1	83.5	145.0	151.2	144.2
	1957: January	121.3	116.6	123.8	112.0	83.5	152.1	151.6	144.7
	February	121.5	117.3	124.2	113.1	83.5	151.1	151.8	143.8
	March	122.4	118.9	124.4	115.5	83.5	148.8	153.0	144.2
	April	122.6	118.6	124.9	114.6	84.0	147.3	154.1	145.6
	1956: April	119.1	115.6	124.3	110.1	82.1	136.5	143.8	143.4
Tokyo	1956: December	118.9	113.7	120.7	110.0	83.0	142.9	145.3	142.7
	1957: January	119.8	114.7	120.9	111.4	82.9	150.2	145.5	142.7
	February	119.4	114.4	121.1	110.9	82.7	148.4	145.0	142.2
	March	120.6	116.6	121.5	114.1	82.7	146.5	145.8	142.1
	April	120.7	116.1	121.8	113.1	81.8	145.0	148.2	144.7
	May	121.8	117.4	123.2	114.4	83.9	145.2	148.0	145.0
	1956: May	118.4	113.2	121.1	109.1	83.0	139.5	145.2	142.4

18. Labor Population Survey (In 1,000) (Labor Ministry)

Year & Month	Total (1) Population	Population 14 years old and over					Not in Labor Force	Agriculture & Forestry		Non-Agricultural Industry	
		Total (2)	Labor Force: Total of the following three columns	Labor Force: Agriculture & Forestry	Labor Force: Non-Agricultural Industries	Labor Force: Totally Unemployed		Not at Work (3)	At Piece-Work (4)	Not at Work (3)	At Piece-Work (4)
1956: October	90,300	63,030	44,380	18,570	25,300	510	18,600	130	5,230	280	3,270
November	90,400	63,130	43,740	17,040	26,170	530	19,330	160	5,800	240	3,380
December	90,400	63,210	42,330	14,450	27,330	560	20,780	270	6,930	290	4,060
1957: January	90,500	63,370	40,900	13,290	27,050	570	22,370	310	7,570	300	4,410
February	90,600	63,490	41,280	13,640	27,030	610	22,160	330	6,750	260	3,830
1956: February	89,700	62,190	39,580	15,430	25,420	750	22,530	310	8,280	310	4,270

19. Labor Disputes & No. of Participants

(1,000 Participants) (Labor Ministry)

Year & Month	Dispute Total		Not Accompanied by Dispute Tactics		Accompanied by Disputes: Total		Strikes		Lock-outs		Work Slowdown		Business Control	
	No. of Cases	No. of Participants	No. of Cases	No. of Participants	No. of Cases	No. of Participants	No. of Cases	No. of Participants	No. of Cases	No. of Participants	No. of Cases	No. of Participants	No. of Cases	No. of Participants
1956: Oct.	88	110	33	15	60	95	41	61	1	(48)	29	58	—	—
Nov.	185	406	53	67	139	338	113	201	1	(157)	59	159	—	—
Dec.	193	534	92	382	104	152	81	52	3	(1,170)	39	104	1	(51)
1957: Jan.	47	224	29	208	19	16	13	3	3	(227)	6	15	—	—
Feb.	63	406	33	261	37	144	27	35	2	(66)	15	119	—	—
Mar.	159	260	48	56	117	203	89	137	5	(394)	50	101	1	(245)
1956: Mar.	129	209	54	37	85	172	63	50	4	(151,372)	39	121	—	—

20. Indices for Industrial Activities

(1934-36=100) (Economic Planning Board)

Year & Month	Industrial Activities: All	Industrial Activities: Public Works	Industrial Activities: Mining-Manufacturing	Mining	Manufacturing: All	Foodstuff	Textiles	Printing & Binding	Chemicals	Rubber & Leather	Wood & Wood Products	Ceramics	Metals	Machinery
	(153)	(2)	(151)	(10)	(141)	(12)	(12)	(1)	(37)	(10)	(2)	(7)	(18)	(42)
1956 Average	227.4	294.8	219.1	129.7	231.3	218.3	100.0	134.8	367.9	215.4	210.2	214.4	265.9	396.9
1956: November	241.1	308.1	232.5	140.3	245.1	222.8	109.1	142.5	372.6	242.6	228.6	238.0	298.2	412.8
December	249.1	340.2	239.7	143.1	252.9	246.5	109.9	141.4	408.6	244.6	225.0	244.5	298.1	408.6
1957: January	226.9	335.2	217.7	123.8	229.4	204.8	97.1	143.8	358.4	235.0	215.8	224.6	294.3	365.3
February	242.1	309.3	233.4	137.2	246.7	204.1	107.5	141.4	400.4	259.2	218.0	240.1	303.4	401.3
March	▲253.7	▲322.6	▲244.7	▲133.7	▲259.9	▲219.1	▲105.6	▲141.3	▲435.6	▲279.2	▲223.0	▲261.0	▲321.8	▲429.9
April	254.8	321.6	245.7	143.3	259.8	209.4	108.2	140.1	446.9	273.8	223.0	262.7	307.7	429.0
1956: April	219.4	295.4	211.2	125.8	222.8	213.9	95.7	127.9	390.4	199.8	203.0	214.0	263.4	323.4

Notes: * except perishable vegetables. Figures in parentheses in Table 19 are not in 1,000. Figures in parentheses in Table 20 are the numbers of companies surveyed.

21. Production by Major Items

Items	In	1956 Total	1957 March	1957 April
Electricity, Coal, Cokes, Gas			▲	△
Electricity	mil. KWH	▲ 61,413	5,110	5,620
Coal	1,000 Tons	46,555	4,072	4,430
Cokes	Tons	8,240,343	808,022	781,470
Gas	1,000 CM	2,191,922	327,988	255,223
Minerals				
Gold	KG.	▲ 7,509	570	532
Silver	Tons	▲ 191.8	15.0	15.1
Copper	,,	▲ 78,469	5,993	6,320
Lead	,,	▲ 29,524	2,649	2,859
Zinc	1,000 tons	▲ 123.0	9.6	10.0
Sulphuric Iron	,,	▲ 3,098.5	242.9	254.9
Iron	,,	▲ 1,087.2	77.5	79.0
Refined Sulphur	,,	▲ 247.2	20.8	21.0
Crude Oil	1,000 Kl.	▲ 349.9	29.2	28.0
Natural Gas	1,000 CM.	▲ 176,772	17,063	18,591
Non-ferrous Metals & Products				
Electric Gold	KG.	9,186	856	531
Electric Silver	Ton	253.9	22.8	16.9
Electric Copper	,,	▲ 126,156	10,992	8,037
Electric Lead	,,	46,362	4,050	2,987
Zinc	,,	83,205	8,849	8,660
Electric Tin	,,	▲ 1,185.3	90.4	99.5
Mercury	,,	▲ 287.2	34.8	43.0
Nickel	,,	▲ 5,663.6	694.7	436.1
Aluminum	,,	65,997	5,072	4,323
Rolled Aluminum	,,	62,518	5,610	5,987
Rolled Copper	,,	▲ 150,266	15,410	16,162
Wires & Cables	,,	114,066	14,449	14,398
Oil Products				
Gasoline	1,000 Kl.	3,035.5	350.4	334.8
Light Oil	,,	886.6	97.8	75.6
Heavy Oil	,,	5,982.5	610.7	644.8
Lubricants	,,	447.8	39.1	39.5
Iron & Steel Products				
Pig-iron	1,000 Tons	▲ 5,987.1	588.7	558.6
Steel	,,	11,106.4	1,070.1	1,093.4
Open Hearth Steel	,,	8,966.9	864.4	875.6
Converter Steel	,,	448.9	40.4	35.5
Electric Furnace Steel	,,	1,690.5	165.3	182.3
Ferro-alloys	,,	276,415	9,720	29,400
Rolled iron materials	,,	8,185.7	840.5	772.2
Iron Shapes (Medium size)	Ton	494,535	57,741	56,587
Iron Bars	,,	26,744	2,657	2,051
Iron Tubes Materials	,,	257,224	22,168	24,902
Iron wire	,,	572,391	47,430	47,346
Iron Sheets (Thick)	,,	▲1,921,527	215,193	206,874
Iron Sheets (Thin)	,,	▲ 688,264	58,255	54,156
Rolled Special Steel	1,000 Tons	494.8	58.7	54.1
Iron Tubes	Ton	▲ 509,087	53,522	54,230
Gas-welded steeltubes	,,	82,718	8,753	9,606
Forged Steel	,,	165,556	16,456	17,368
Cast Steel	,,	209,723	21,719	22,550
Tin-Plates	,,	244,700	21,774	20,433
Galvanized Sheets	1,000 Tons	590.2	50.1	50.1
Machinery & Machine Tools				
Steam Boilers	Ton	32,165	2,132	4,590
Steam Turbines	KW.	266,921	..	..
Water Turbines	,,	639,199	37,003	7,800
Gasoline Engines	HP.	223,129	30,809	32,390
Oil Burners	,,	464,959	44,111	44,480
Petroleum Engines	,,	589,203	37,132	43,160
Machine Tools	1,000 Pcs.	2,607	72	..
Drills	,,	16,077	1,627	1,618
Transmitters	1,000 Tons	9,251	1,042	1,045
Cogs	,,	5,564	789	819
Thrashing Machines	Units	▲ 251.7	14.5	15.2
Hulling Machines	,,	▲ 65.9	3.8	3.8
Rice-cleaning Machines	,,	79,412	5,330	4,390
Air Compressors	Ton	7,244	875	760
Ventilators	,,	8,181	845	..
Pumps	,,	26,805	2,334	2,290
Refrigerators	,,	16,490	851	870
Conveyers	,,	22,653	2,368	2,510
Cranes	,,	21,708	3,285	2,800
Winches	,,	6,301	586	600
Elevators	,,	8,575	616	680
R. Staple Weaving Machines	Units	21,920	1,840	1,648
Cotton Weaving Machines	,,	23,189	3,931	3,554
Wool Weaving Machines	Tons	▲ 5,844	230	204
Sewing Machines	1,000 Unit	▲ 1,722.4	161.9	171.1
Lathes	Units	6,667	521	600
Drilling Machines	1,000 Tons	4,433	622	440
Millwork Power Generators	KVA	▲ 788.1	128.2	358

Items	In	1956 Total	1957 March	1957 April
			▲	△
Ordinary Motors	1,000 KW	▲ 1,289.3	138.5	..
Ordinary Transformers	1,000 Units	▲ 233.7	29.6	..
Mercury Rectifiers	1,000 KW	▲ 143.0	6.5	10.0
Condensers (High Pressure)	,,	▲ 1,289.3	138.5	..
Electric Welders	Unit	20,861	2,421	..
Circuit Breakers	,,	210,083	46,833	43,219
Electric Fans	1,000 Units	▲ 797.3	102.0	106.9
Electric Bulbs	1,000 Pcs.	161,503	13,336	13,521
Special Electric Bulbs	,,	70,691	8,015	8,112
Watt-hour Meters	1,000 Units	▲ 1,940.9	146.3	142.5
Electric Meters	Units	53,650	5,999	5,958
Storage Batteries	1,000 Units	▲ 800.5	91.8	..
X-Ray Equipments	Sets	9,726	492	463
Telephones	1,000 Units	▲ 676.0	72.1	75.1
Telephone Switchboards	Sets	5,485	817	698
Automatic Tel. Switchboards	1,000 Circuits	▲ 252.4	39.2	39.1
Radios	1,000 Sets.	▲ 2,981.2	318.4	321.9
Televisions	,,	▲ 312.1	46.6	51.4
Electric Tubes for Receiving	1,000 Pcs.	45,151	5,178	4,950
Elect. Tubes for Transmis.	,,	▲ 143.0	11.4	..
Truck Chassises	Units	27,866	3,783	3,868
Bus Chassises	,,	6,052	799	720
Small Four-wheeler Chassises	,,	67,201	6,840	7,312
Small Three-wheeler Chassises	,,	105,513	10,542	10,450
Two-wheelers	,,	105,276	17,538	17,680
Bicycles	,,	1,397,340	143,893	217,412
Industrial Locomotives	,,	445	48	43
Binoculars	1,000 Pairs	▲ 410.2	29.8	30.3
Cameras	1,000 Pcs.	▲ 1,265.5	114.1	115.6
Watches	,,	▲ 6,892.1	670.8	679.1
Forged iron	Ton	1,241,523	124,503	127,244
Textiles & Yarns				
Cotton Yarn	1,000 lb.	▲1,087,021	93,396	100,268
Silk Yarn	,,	4,573	326	332
Rayon Staple Yarn	,,	227,395	23,507	24,352
Rayon Filament Yarn	,,	514,644	49,484	52,344
Synthetic Chemical Textiles	,,	53,006	6,298	36,312
Woollen Yarn	,,	232,260	1,668	12,272
Bast Fibre Yarn	,,	101,393	8,364	9,271
Staple Fibres	,,	689,924	63,257	59,237
Cotton Textiles	Mil. sq. y.	3,479.8	310.6	327.6
Silk Textiles	1,000 sq. y.	212,854	17,474	18,629
Spun Silk Textiles	,,	25,688	1,669	1,608
Rayon Textiles	,,	▲ 920,693	76,695	78,607
Rayon Staple Textiles	,,	1,112,251	105,499	109,518
Woolen Textiles	,,	220,384	19,800	18,698
Bast Fibre Textiles	,,	130,722	11,545	12,373
Chemicals				
Ammonium	1,000 Tons	879.6	75.5	79.3
Ammonium Sulphate	,,	▲ 2,332.6	172.9	195.2
Superphosphate of Lime	,,	2,058.8	173.0	198.1
Carbide	,,	756.0	23.4	82.3
Calcium Cyanamide	,,	507.9	20.5	37.7
Synthetic Chem. Fertilizers	,,	1,203.3	21.8	134.7
Caustic Soda	,,	645.3	61.0	59.8
Soda Ash	,,	379.4	34.4	33.8
Synthetic Hydrochloric Acid	Ton	267,421	20,847	23,110
Bleaching Powder	,,	31,713	1,418	1,663
Liquid Chlorine	,,	93,165	8,832	9,608
Crude Bensol	,,	118,884	11,980	11,485
Refined Bensol	,,	▲ 56,648	5,303	5,455
Pure Toluol	,,	9,465	883	912
Industrial Explosives	,,	32,526	2,915	2,713
Paper & Pulp				
Pulp	Long Ton	2,167,139	203,373	197,080
Western Style Papers	1,000 lb.	3,429,872	324,618	319,396
Ceramics				
Firebricks	1,000 Tons	▲ 873.6	97.5	102.7
Chinawares	,,	438.1	40.1	41.4
Glass Products	,,	▲ 446.7	47.1	48.6
Red Bricks	Mil. pcs.	254.5	18.2	22.6
Sheet Glass	1,000 Boxes	7,724	751	669
Cement	1,000 Tons	13,024	1,294	1,392
Miscellaneous				
Automobile Tires	1,000 pcs.	3,150	392.6	402.4
Metal Toys	,,	▲ 307,739	24,416	24,184
Pencils	1,000 Gross	7,136	613	607
Needles	Mil. pcs. 1,000	▲ 3,014	219	256
Match	Match tons	▲ 432.5	41.3	40.5
Piano	Sets	14,130	1,551	1,660
Leathers	Ton	▲ 71,967	7,128	6,797

Source: Ministry of International Trade & Industry. Note: ▲ Revised at source. △ Provisional figures.

22. Machinery Orders (In ¥ million) (Economic Planning Board)

Items	1955 Average	1956 Average	1956 Nov.	1956 Dec.	1957 Jan.	1957 Feb.	1957 Mar.	1956 Mar.
By Products	3,183	7,725	9,030	14,221	11,562	10,396	24,815	6,760
Prime Movers	4,621	9,696	12,947	14,752	12,914	17,126	20,387	8,195
Heavy Electric Machinery	1,448	2,281	3,048	2,289	1,676	1,991	3,514	2,621
Communication Apparatus	5,890	12,531	15,373	17,300	13,489	20,824	16,997	9,627
Industrial Machinery	159	567	686	882	657	773	1,150	333
Machine Tools	1,738	2,380	1,288	1,965	3,124	5,564	3,647	2,414
Rolling Stocks	13,832	23,626	10,202	21,390	23,638	6,539	24,028	13,904
Ships								
Total of the Above	30,871	58,810	52,574	73,499	67,060	63,213	94,541	43,904
Iron & Steel Frames	1,187	1,514	1,992	2,738	1,444	4,308	2,363	1,079
Bearings	986	1,611	1,724	2,407	1,896	2,254	1,917	1,483
Electric Wires & Cables	4,013	4,390	8,158	9,231	8,870	8,283	8,141	5,574
By Customers	21,093	17,041	4,747	17,622	23,347	2,635	11,814	12,209
Foreign Sources	3,193	4,620	5,930	5,730	2,457	6,873	6,511	5,536
Government	14,279	35,266	39,968	48,154	39,310	51,138	73,871	24,305
Private	6,711	17,112	25,926	21,636	18,330	30,484	27,957	12,090
Manufacturing	1,244	2,809	1,974	3,032	2,787	3,217	3,219	2,595
Textiles	1,765	4,831	10,574	5,960	3,288	6,223	8,053	3,432
Chemicals	834	3,067	4,925	4,885	5,831	11,690	7,340	1,406
Iron & Steel	1,927	4,713	5,505	5,365	4,302	5,690	6,961	3,571
Others	941	1,691	2,956	2,390	2,124	3,741	2,384	1,086
Non-Manufacturing	7,569	18,154	14,033	26,517	20,980	24,053	45,909	12,208
Transportation	3,107	8,695	6,126	6,283	5,197	7,341	14,014	3,211
Electric Power	2,545	6,247	4,100	16,780	12,590	10,005	25,011	6,138
Coal Mining	249	785	483	500	304	633	1,210	380
Agriculture, Forestry, Fishery	593	851	1,070	790	810	3,488	2,142	535
Others	1,075	1,909	2,254	2,164	2,079	2,586	1,349	1,944
Sales Agents	1,304	1,881	1,927	1,996	1,945	2,585	2,975	1,859
Total Orders	30,871	58,810	52,574	73,449	67,060	63,213	94,541	43,904
Orders Outstanding	286,699	617,917	591,163	617,917	650,886	679,054	723,428	339,278
Sales Total	19,913	31,447	31,827	44,392	32,978	38,742	45,488	34,206

23. Electric Energy Consumption (1,000 KWH)

Supplied by Power Companies (Over 500 kw)					Industries	Self-generated				
1956		1957				1956			1957	
November*	December*	January*	February*	March*		October	November	December	January	February
242.9	252.0	240.1	267.2	233.7	Mining	50,895	51,724	50,985	47,968	47,728
32.1	32.2	29.1	28.9	30.2	Foodstuffs	1,545	2,197	3,216	2,366	2,324
186.7	196.2	176.4	184.1	185.9	Spinning	1,379	1,334	1,192	1,590	1,784
218.5	221.2	204.7	211.3	216.3	Paper & Pulp	69,924	71,162	79,619	73,096	69,591
734.1	639.4	587.8	562.7	575.6	Chemicals	241,572	218,178	219,116	213,216	205,092
14.8	14.6	12.7	13.4	13.9	Oil & Coal Products	3,028	2,352	2,995	3,179	2,993
21.2	21.1	20.4	21.7	22.5	Rubber Goods	—	—	—	—	—
68.4	71.6	66.8	63.3	66.9	Glass & Ceramics	99,800	102,856	107,059	91,772	114,387
577.3	544.1	498.5	503.9	490.5	Primary Metals	236,540	242,166	229,780	224,509	196,948
7.6	8.0	7.4	8.1	8.1	Metal Products	—	—	—	—	—
37.9	41.1	37.0	39.3	38.7	Machinery	527	604	404	277	416
56.5	53.7	50.5	53.6	48.0	Electric Machinery & Tools	—	—	—	—	—
78.9	81.8	75.5	81.0	80.9	Transportation Machinery & Tools	—	—	—	—	—
11.5	8.2	11.4	12.2	12.3	Other Manufacturing	—	—	—	—	—
2,045.6	1,937.2	1,778.2	1,783.5	1,789.8	Manufacturing Total	654,315	640,849	643,477	610,005	593,535
281.6	309.9	308.9	286.8	308.1	Public Utilities	210	168	207	213	198
105.0	109.4	106.5	65.4	107.7	Others	—	—	—	—	—
2,675.1	2,608.5	2,433.7	2,402.9	2,439.3	Total	705,420	692,759	694,669	658,186	641,461

24. Coal Supply & Demand (1,000 metric tons)

Year & Month	Production	Stock Deliveries: Coal Dealers	Stock Deliveries: Large User Factories	Stock Deliveries: Adjustment	Deliveries: Total	Deliveries: Deliveries	Deliveries: of which Exports	Others	Home Consumption	Month-end Stocks: Total	Month-end Stocks: Coal Dealers	Month-end Stocks: Large User Factories
1956: Total	48,281	(−) 68	(+) 519	(+) 113	48,326	49,767	351	(−)1,441	48,485	3,321	1,234	2,087
1956: November	4,289	(+) 54	(+) 66	(+) 8	4,351	4,474	33	(−) 123	4,384	5,941	1,875	4,066
December	4,297	(+) 258	(+) 754	(+) 8	4,563	4,645	35	(−) 83	5,282	4,929	1,617	3,312
1957: January	4,068	(+) 276	(+) 546	(+) 5	4,349	4,472	13	(−) 123	4,882	4,107	1,341	2,766
February	4,187	(+) 54	(+) 188	(+) 3	4,244	4,439	28	(−) 195	4,404	3,865	1,287	2,578
March	4,072	(+) 53	(+) 491	(+) 23	4,148	4,418	5	(−) 270	4,634	3,321	1,234	2,087
1956: March	2,948	(+) 921	(+) 41	(+) 48	3,919	4,165	73	(−) 248	3,885	3,763	1,166	2,597

25. Supply & Demand of Pig-iron and Steel Materials (In tons) (MITI)

Year & Month	Pig iron: Production	Pig iron: Deliveries	Pig iron: In Stock	Steel Materials: Steel: Production	Steel: Deliveries	Steel: In Stock	Special Steel: Production	Special Steel: Deliveries	Special Steel: In Stock
1956: Total	5,987,104	1,255,685	87,196	8,185,676	6,275,251	297,624	494,765	373,749	23,433
1956: October	518,342	116,832	86,865	633,850	503,595	273,904	46,490	35,550	21,464
November	536,795	106,550	82,378	778,539	586,892	290,512	49,359	37,176	21,775
December	551,543	106,470	87,196	761,731	579,691	297,624	49,643	35,007	23,433
1957: January	573,612	120,058	95,669	764,053	568,791	322,939	51,559	39,116	23,204
February	522,216	98,244	98,562	789,699	615,725	314,174	55,472	40,598	23,400
1956: February	449,394	87,808	102,773	637,746	477,756	287,210	35,059	27,081	24,278

Notes: 55 machinery companies together with 18 iron frame, bearing & electric wire companies are surveyed for Table 22. * in Table 23 indicate that the unit is in million KWH. Table 24 does not include import coal. Others in "Demand" column is the balance of sales volume by un-authorized sales agents plus dust coal output. "At Collieries" column includes the coal stocks on the seaboard mines.

26. Supply & Demand of Textile Products

(MITI, Central Raw Silk Association)

Year & Month	Cotton Yarn (1,000 lb.)				Rayon Yarn (1,000 lb.)				Raw Silk (123 lb. bale)			
	Carry-overs	Receipts	Deliveries	Month-end Stocks	Carry-overs	Receipts	Deliveries	Month-end Stocks	Production	Exports	Home Deliveries	Term-end Stock
1956: Sept.	7,201	91,728	91,457	7,472	3,661	31,369	31,679	3,351	30,339	7,190	22,707	17,998
Oct.	7,472	87,918	87,461	7,929	3,351	29,939	29,647	3,643	30,000	6,756	22,071	19,171
Nov.	7,929	86,925	87,138	7,716	3,643	30,890	29,821	4,712	28,387	7,078	22,424	18,056
Dec.	7,716	86,438	84,260	9,894	4,712	27,559	28,064	4,207	28,409	7,508	22,249	16,708
1957: Jan.	9,894	100,497	101,048	9,343	4,207	29,856	28,814	5,249	18,891	5,011	16,496	14,092
Feb.	9,342	90,997	91,702	8,638	5,249	29,870	29,467	5,652	23,649	4,654	19,341	13,746
Mar.	8,638	93,290	93,669	8,259	5,652	32,771	31,680	6,743	25,195	5,064	20,819	13,058
1956: Mar.	4,614	63,762	63,963	4,413	3,009	24,486	24,888	2,607	25,528	5,709	17,593	18,233

Year & Month	Cotton Textiles (1,000 sq. yds)				Rayon Yarn (1,000 sq. yds)				Silk Textiles (1,000 sq. yds)	
	Carryovers	Receipts	Deliveries	Month-end Stocks	Carryovers	Receipts	Deliveries	Month-end Stocks	Production	Exports
1956: Sept.	207,066	497,029	502,757	201,338	74,683	161,882	162,780	73,785	16,295	4,335
Oct.	201,338	457,649	455,579	203,408	73,785	139,016	142,811	69,990	17,325	4,963
Nov.	203,408	483,669	484,150	202,927	69,990	146,251	145,434	70,807	17,885	4,831
Dec.	202,927	466,425	471,360	197,992	70,807	135,319	134,097	72,029	18,503	7,063
1957: Jan.	197,992	479,322	482,853	194,461	72,029	147,581	142,821	76,789	16,994	3,770
Feb.	194,461	485,040	473,376	206,125	76,789	152,289	155,168	73,910	17,333	4,238
Mar.	206,125	509,798	501,266	214,657	73,910	158,221	157,090	75,041	17,471	—
1956: Mar.	165,526	483,104	468,629	180,001	58,890	154,336	153,212	60,014	13,631	2,938

27. Supply & Demand of Paper and Pulp

Year & Month	Pulp (long ton)				Paper, Western Style (in 1,000 pounds)				Cardboard & Japanese Style Paper (in 1,000 pounds)			
	Production	For Paper	Deliveries	In Stock	Production	Deliveries	Self-Consumption	In Stock	Production	Deliveries	Self-Consumption	In Stock
1956: Sept.	184,043	97,032	91,995	24,162	292,566	290,281	9,634	136,122	486,380	474,429	22,178	169,177
Oct.	194,374	104,686	89,080	24,770	311,805	302,956	10,701	134,270	516,072	497,693	23,656	163,899
Nov.	193,403	102,357	91,393	24,423	302,640	299,203	9,234	128,472	508,858	492,274	23,470	157,013
Dec.	196,853	102,988	92,616	25,672	303,650	302,347	10,111	119,664	514,396	501,439	23,307	146,662
1957: Jan.	187,748	100,202	84,868	28,350	293,609	295,808	7,960	109,505	496,411	485,474	20,306	137,293
Feb.	188,790	99,942	88,182	29,016	296,400	298,238	8,640	99,033	507,112	494,975	22,411	127,019
Mar.	203,373	109,294	94,685	24,810	324,618	313,074	10,498	100,079	550,072	523,030	23,811	130,250
1956: Mar.	179,059	96,510	86,267	32,611	285,249	272,542	9,573	167,114	464,266	439,793	19,795	217,711

28. Supply & Demand of Soda and Ammonium Sulphate

(In metric tons)

Year & Month	Ammonium Sulphate			Soda Ash			Caustic Soda		
	Production	Deliveries	In Stock	Production	Deliveries	In Stock	Production	Deliveries	In Stock
1956: September	192,580	159,754	163,680	31,325	30,579	7,395	56,352	49,023	10,924
October	200,932	181,530	175,240	32,603	31,931	6,571	59,738	51,477	11,267
November	196,687	133,408	227,912	34,327	32,584	6,665	58,993	50,473	11,614
December	198,843	159,845	261,451	35,352	34,930	5,443	59,262	51,321	11,022
1957: January	181,721	209,503	230,611	35,702	31,278	8,184	59,315	51,547	11,251
February	172,075	194,209	201,370	33,070	31,923	7,675	56,835	51,203	9,253
March	172,930	235,321	129,701	34,386	32,656	7,566	60,950	54,346	7,565
1956: March	189,695	187,128	100,965	31,766	30,486	3,853	49,227	41,911	8,023

29. Supply & Demand of Cement

(In tons) (MITI.)

Year & Month	Production	Consumption	Deliveries			Month-end Stocks
			Export	Home sales	Total	
1956: Sept.	1,175.8	5.8	204.0	990.3	1,194.3	374.6
Oct.	1,156.5	6.0	134.8	1,078.6	1,213.4	311.7
Nov.	1,171.0	5.8	154.2	1,051.5	1,205.7	271.1
Dec.	1,175.4	6.7	154.4	980.5	1,135.0	304.9
1957: Jan.	1,019.4	5.3	159.1	890.2	1,049.3	269.8
Feb.	1,158.5	6.0	160.2	970.5	1,130.7	291.8
Mar.	1,293.8	8.8	190.3	1,135.3	1,325.6	251.8
1956: Mar.	1,062.7	4.9	123.6	959.5	1,083.0	279.4

30. Supply & Demand of Rubber

(Crude Rubber tons) (MITI.)

Year & Month	Production (A)	Deliveries (B)	Month-end Stocks	Delivery Rates (B)/(A)	Stock Rates (C÷A)
1956: Sept.	9,244	9,642	3,318	104	36
Oct.	9,602	9,612	3,326	100	35
Nov.	9,264	9,036	3,657	97	39
Dec.	9,500	9,659	3,457	102	36
1957: Jan.	8,801	8,834	3,481	100	40
Feb.	9,723	9,668	3,577	99	37
Mar.	10,562	10,403	3,811	98	36
1956: Mar.	7,722	7,632	3,810	99	49

31. Department Store Sales

(In million yen) (MITI)

By Month	No. of Stores	Total	Clothing	Sundry Goods	Household Utensils	Provisions	Dining Room	Services	Outside Store Sales	Others	Gift Certificates
1956: November	167	23,524	12,943	3,864	2,631	2,992	608	199	16	269	199
December	168	52,571	27,156	8,734	5,213	9,873	792	249	29	525	1,530
1957: January	171	17,226	7,752	3,650	1,866	3,006	593	146	18	194	210
February	173	17,596	7,983	3,784	1,991	2,927	555	147	16	187	237
March	174	25,978	12,602	5,580	2,674	3,782	818	223	22	276	411
April	174	23,904	11,158	5,290	2,815	3,369	777	227	21	247	301
1956: April	160	19,620	9,068	4,445	2,066	2,928	612	178	18	304	222

32. JPA Procurement Contracts (In $1,000)

Year & Month	Monthly			Cumulative total as from June 26, 1950		
	Total	Merchandise	Services	Total	Merchandise	Services
1956 Average	13,874	5,772	8,102	—	—	—
1956: September	4,857	2,343	2,514	1,838,825	1,052,312	786,513
October	14,651	6,405	8,246	1,853,255	1,058,683	794,572
November	10,052	5,661	4,391	1,863,203	1,064,277	798,926
December	7,981	3,578	4,403	1,871,091	1,067,802	803,289
1957: January	16,776	8,610	8,166	1,887,867	1,076,412	811,455
February	8,138	5,006	3,132	1,895,979	1,081,392	814,587
March	10,977	5,077	5,900	1,907,047	1,086,455	820,592
April	15,165	9,353	5,812	1,922,212	1,095,808	826,404
1956: April	14,494	7,644	6,850	1,745,210	1,019,891	725,319

33. JPA Procurement Payments (In $1,000)

Year & Month	Monthly			Cumulative total as from June 26, 1950		
	Total	U.S.'s Burden	Japan's Burden	Total	U.S.'s Burden	Japan's Burden
1956 Average	28,732	21,380	7,352	—	—	—
1956: August	29,930	24,930	5,000	2,503,282	1,934,998	568,284
September	34,403	24,403	10,000	2,537,685	1,959,401	578,284
October	33,894	23,894	10,000	2,571,579	1,983,295	588,284
November	28,311	23,311	5,000	2,599,890	2,006,606	593,284
December	28,113	23,113	5,000	2,628,003	2,029,719	598,284
1957: January	24,526	17,859	6,667	2,652,529	2,047,578	604,951
February	24,734	14,734	10,000	2,677,263	2,062,312	614,951
March	23,596	18,596	5,000	2,700,859	2,080,908	619,951
1956: March	30,407	21,720	8,687	2,362,222	1,828,513	533,709

34. Exports and Imports by Value

Year & Month	Value (In $1,000)			Value (In million yen)		
	Exports	Imports	Balance	Exports	Imports	Balance
1956 Total	2,500,636	3,229,734	(-) 729,098	900,229	1,162,704	(-) 262,475
1956: October	233,811	304,773	(-) 70,962	84,172	109,718	(-) 25,546
November	216,061	281,990	(-) 65,929	77,782	101,516	(-) 23,734
December	271,772	318,539	(-) 46,767	97,838	114,674	(-) 16,836
1957: January	109,005	327,975	(-) 158,970	60,842	118,071	(-) 57,229
February	213,253	344,161	(-) 130,908	76,771	123,898	(-) 47,127
March	274,387	392,953	(-) 118,566	98,779	141,463	(-) 42,684
April	224,556	433,031	(-) 208,475	80,840	155,891	(-) 75,051
May	237,053	451,431	(-) 214,378	85,339	162,515	(-) 77,176
1956: May	194,944	271,746	(-) 76,801	70,180	97,829	(-) 27,648

35. Exports and Imports by Settlement Area

(In 1,000 dollars)

Year & Month	Exports				Imports			
	Total	Dollar	Sterling	Open Account	Total	Dollar	Sterling	Open Account
1956 Total	* 2,500,636	1,095,272	906,457	498,897	* 3,229,734	1,725,151	1,057,476	447,020
1956: August	215,809	96,655	76,336	42,818	* 289,389	145,459	104,322	39,588
September	205,194	91,263	73,509	40,422	* 258,986	141,972	84,100	32,908
October	233,811	106,427	84,402	42,982	* 304,773	117,896	91,028	35,845
November	216,061	100,699	80,962	34,400	* 281,990	161,378	86,960	33,649
December	271,772	120,845	108,755	42,172	* 318,539	183,949	99,305	35,273
1957: January	* 169,005	78,817	67,563	22,625	* 327,975	177,263	116,861	33,851
February	* 213,253	89,368	94,058	27,668	* 344,161	194,536	118,351	31,273
March	* 274,387	124,275	113,028	34,046	* 392,953	236,073	149,118	37,762
1956: March	223,862	86,753	81,703	55,401	253,275	120,595	88,189	44,490

36. Foreign Exchange Receipts and Payments by Month

(In 1,000 dollars)

Year & Month	Receipts			Payments			Balance
	Exports	Invisible	Total	Imports	Invisible	Total	
1956 Total	2,402,241	822,521	3,224,763	2,470,199	461,229	2,931,429	293,334
1956: September	187,968	68,839	256,807	207,036	30,908	237,945	18,862
October	215,857	73,504	289,362	221,399	42,648	264,048	25,314
November	197,863	71,958	269,821	234,695	34,593	269,289	532
December	205,820	80,370	286,190	231,868	42,213	274,081	12,108
1957: January	218,714	65,974	284,689	261,759	37,011	298,770	(-) 14,082
February	212,506	64,160	276,667	278,260	61,618	339,879	(-) 63,211
March	226,859	72,895	299,754	302,741	51,285	354,027	(-) 54,272
April	223,663	74,606	298,270	301,699	53,381	355,081	(-) 56,810
1956: April	209,919	65,730	275,650	181,936	38,738	220,675	54,975

Notes: The yen-base contracts in Table 32 are those contracts with the Japanese Government pays for according to the article 25 of the Japan-America Administrative Agreement out of "defense expenses." * includes optional cargoes in exports and imports from such special sources as pelagic fisheries, Japanese territorial waters, foreign territorial waters, and high seas in Imports.

37. Exports and Imports by Country

(In million yen)

Settlement Area	Countries	Exports					Imports				
		1956 Total	Dec. 1956	Jan. 1957	Feb. 1957	Mar. 1957	1956 Total	Dec. 1956	Jan. 1957	Feb. 1957	Mar. 1957
	Total Exports or Imports	900,229	97,838	60,842	76,771	98,779	1,162,704	114,674	118,071	123,898	141,463
	Asia Total	267,989	41,269	27,711	35,191	38,917	377,253	33,494	35,667	35,962	42,798
0	Korea	22,898	1,767	924	1,517	2,230	4,004	477	405	307	370
£△	China	24,242	5,048	1,824	1,672	1,546	30,113	2,558	2,590	1,813	2,566
$	Ryukyu Islands	24,241	2,718	1,633	1,385	1,744	7,990	706	741	709	634
£	Hong Kong	48,406	4,319	4,252	4,340	4,650	6,725	933	846	935	872
0	Formosa	28,029	2,833	2,606	2,165	2,492	16,383	2,031	3,233	2,011	2,677
	Southeast Asia Total	235,173	24,689	18,899	20,109	26,398	217,261	18,731	20,051	21,547	21,766
$	South Viet Nam	19,238	1,372	1,464	1,707	2,320	563	69	45	34	8
£△	Thailand	21,922	3,625	1,968	2,745	3,462	12,641	817	759	856	662
£	Malayan Union	5,652	614	281	528	554	38,986	3,440	2,605	3,042	3,823
£	Singapore	22,396	2,828	1,278	2,150	2,585	10,933	1,162	1,656	1,688	1,458
0	Philippines	19,981	2,323	1,623	1,844	2,220	42,033	3,803	3,525	3,503	3,249
£	British Borneo	366	41	35	13	40	10,997	1,232	961	1,272	1,354
0	Indonesia	27,282	2,337	1,905	2,423	2,229	32,035	2,921	3,347	2,895	2,388
£	Burma	13,057	1,576	2,114	1,857	2,594	15,254	277	453	1,198	1,752
£	India	37,907	3,633	3,314	5,175	4,209	37,229	2,899	3,045	3,827	4,547
£	Pakistan	6,263	555	202	308	421	18,224	1,471	2,073	2,585	2,568
£	Ceylon	8,733	1,158	302	1,163	855	1,172	136	108	159	269
$	Iran	6,877	1,063	481	786	1,145	6,142	483	775	801	1,043
£	Iraq	7,218	1,423	521	1,183	945	4,502	802	955	565	694
£	Aden	2,888	398	281	296	498	1,216	0	230	201	214
$	Saudi Arabia	2,932	216	171	262	241	49,784	4,110	4,134	3,811	6,017
£	Kuwait	2,876	318	193	494	551	14,609	1,119	1,533	1,587	2,857
0	Turkey	2,290	4	1	12	15	378	7	1	19	3
£	Jordan	824	95	4	138	59	81	81	—	—	—
$	Syria	1,893	161	17	306	118	1,054	53	29	1	—
$	Lebanon	857	58	25	74	152	404	5	0	—	—
	Europe Total	90,135	9,193	4,315	8,049	12,444	83,334	7,079	10,937	11,512	13,320
£△	Sweden	5,880	821	410	636	1,332	2,508	135	302	226	659
£△	Denmark	3,637	1,493	83	172	1,486	1,013	139	125	97	231
£	United Kingdom	22,749	1,613	552	1,021	2,852	23,969	2,453	3,066	3,400	3,387
0	Netherlands	9,646	922	436	962	711	4,261	331	486	477	757
$	Belgium & Luxemburg Economic Union	5,141	600	268	350	419	4,180	360	704	1,389	1,572
£△	France	5,056	453	577	446	980	7,774	575	676	757	1,147
£△	West Germany	13,106	1,571	1,077	1,441	3,334	20,221	2,141	4,304	3,753	4,455
£△	East Germany	1,568	—	—	—	—	2,858	4	1	4	12
$	Switzerland	3,566	518	188	320	334	5,043	374	645	512	526
$	Spain	4,974	196	245	483	85	5,456	219	19	13	20
£△	Italy	6,005	337	166	388	365	3,513	133	160	201	244
£△	Norway	527	57	20	1,280	47	147	13	21	112	83
0	Finland	595	134	62	93	52	557	2	120	34	17
£△	Austria	1,653	209	101	160	148	347	15	23	37	45
	North America Total	234,301	22,779	14,062	17,638	23,064	516,063	57,251	54,731	60,283	61,179
$	Canada	24,885	2,139	1,192	2,030	1,969	51,885	5,355	5,101	3,796	3,801
$	U.S.A.	195,590	19,375	11,758	14,404	17,207	383,254	45,810	45,104	52,050	53,647
$	Mexico	2,548	253	278	187	134	46,119	3,917	3,807	2,626	2,582
$	Cuba	1,366	148	50	96	94	22,138	1,406	685	1,483	628
$	Panama	1,594	154	72	88	1,996	92	3	8	10	254
$	Colombia	2,662	160	138	131	154	608	194	90	89	52
$	Ecuador	438	64	45	61	55	99	2	—	4	5
	South America Total	48,273	3,797	2,021	2,077	3,449	45,960	3,910	2,009	2,820	5,515
$	Peru	3,010	287	590	413	398	3,243	1,237	562	556	1,462
0	Brazil	16,256	1,981	362	494	1,603	18,075	1,133	506	852	2,228
£△	Argentina	14,016	228	75	136	210	12,963	879	628	684	902
$	Chile	2,682	136	256	166	138	1,698	134	89	314	605
	Africa Total	141,300	19,435	11,827	11,767	18,406	26,520	2,722	1,853	2,798	3,575
0	Egypt	3,741	335	178	357	526	15,505	300	405	1,155	1,686
£	Nigeria & Ghana	26,621	2,224	1,603	1,495	1,604	224	22	22	31	27
$	Liberia	81,233	12,896	7,674	6,634	12,594	484	—	2	0	7
$	Belgian Congo	1,361	191	137	115	170	58	—	5	6	19
£	British East Africa	6,017	1,054	609	660	732	5,630	396	368	351	482
£	Union of South Africa	12,465	1,618	855	1,369	1,474	9,492	1,400	889	965	868
	Australia & Oceania Total	18,227	1,365	906	1,272	1,405	103,542	10,214	12,874	10,522	15,076
£	Australia	11,114	851	487	572	766	89,436	9,081	11,123	8,851	13,067
£	New Zealand	2,138	204	158	175	112	3,387	371	359	326	498
$	Hawaii	2,499	165	125	221	164	381	15	31	240	56
0	New Caledonia	387	29	1	47	19	6,137	645	683	555	1,128
0	French Oceania	45	3	2	1	3	1,523	—	203	227	218
$	Guam	525	40	39	5	57	584	15	196	77	79

Source: Finance Ministry.

Note: 0 denotes open account area; $, dollar area; £, sterling area. $△ stands for Specified Area A and B.

38. Exports by Major Articles

(In thousand yen)

Articles	Unit	1956		1957					
		Total		January		February		March	
		Volume	*Value	Volume	Value	Volume	Value	Volume	Value
Food	—	—	63,797	—	3,426,108	—	4,261,291	—	5,880,169
Fish & Shellfish	m.t.	196,489	43,427	11,086	2,336,623	16,847	3,088,563	21,573	4,696,708
Canned, Bottled Fish	,,	108,359	32,181	5,988	1,557,766	5,835	1,684,307	8,614	3,123,847
Cereals	—	—	970	—	42,365	—	42,974	—	25,935
Fruit & Vegetables	m.t.	127,118	9,963	6,489	409,418	8,208	466,570	5,194	404,950
Sugar & Sugar Preparations	—	—	798	—	23,717	—	22,266	—	25,130
Tea	1,000 lbs.	22,579	2,035	1,700	124,848	1,685	140,843	1,642	138,567
Beverage & Tobacco	—	—	959	—	41,709	—	161,276	—	222,501
Beverages	—	—	664	—	31,851	—	29,495	—	41,825
Tobacco	—	—	295	—	9,858	—	131,781	—	180,676
Raw Materials	—	—	34,197	—	2,245,061	—	2,425,368	—	2,744,603
Lumber	cu.m.	546,344	10,257	41,052	585,905	27,770	542,945	29,730	583,899
Textile, Fibre	1,000 lbs.	68,821	19,876	4,537	1,338,827	5,674	1,423,288	8,557	1,649,293
Raw Silk	,,	9,957	15,046	663	1,040,554	596	939,912	653	1,036,529
Fertilizers & Mineral Products	—	—	192	—	15,167	—	19,554	—	14,102
Animal & Vegetable Materials	—	—	3,000	—	250,461	—	357,666	—	374,404
Coal & Petroleum	—	—	4,060	—	156,323	—	231,713	—	121,804
Animal & Vegetable Oils	—	—	8,913	—	365,684	—	1,652,955	—	4,966,151
Animal Oil	m.t.	—	7,813	388	157,108	16,300	1,448,835	44,300	3,987,309
Cod-liver Oil	,,	3,962	1,862	320	152,272	284	140,856	288	265,745
Vegetable Oil	,,	8,191	1,070	1,345	199,089	1,383	202,009	3,034	370,526
Chemicals, Drugs	—	—	38,403	—	3,282,911	—	4,013,965	—	3,922,907
Pharmaceuticals	—	—	3,765	—	277,376	—	264,161	—	466,157
Chemical Fertilizers	m.t.	919,490	17,923	100,388	2,012,280	103,282	2,388,189	96,731	2,037,498
Manufactured Products by Materials	—	—	461,491	—	29,872,983	—	39,681,167	—	44,668,330
Rubber Goods	—	—	8,290	—	429,381	—	812,605	—	1,025,606
Tyres & Inner Tubes	m.t.	17,230	6,793	897	350,301	1,790	671,560	2,170	880,311
Wood & Cork Products	—	—	19,688	—	1,336,438	—	1,915,445	—	1,958,452
Paper & Related Products	m.t.	113,850	10,389	8,786	836,141	9,629	1,015,315	13,153	1,287,702
Textile Yarns & Fabrics	—	—	249,585	—	16,441,621	—	22,684,171	—	25,739,552
Woollen Yarn	1,000 lbs.	7,276	4,918	441	320,911	800	566,432	1,144	825,409
Cotton Yarn	,,	27,294	9,448	2,345	817,378	2,298	708,205	4,077	1,278,374
Rayon Yarn	,,	18,591	3,253	1,151	205,702	1,658	301,417	2,233	400,548
Spun Rayon Yarn	,,	35,526	5,779	2,946	496,495	3,858	650,446	3,050	485,560
Cotton Fabrics	1,000 sq. yds.	1,262,049	95,989	92,656	7,151,598	117,325	9,040,742	123,793	9,546,508
Silk Fabrics	,,	47,884	9,074	3,823	648,830	4,359	796,971	4,974	864,205
Woollen Fabrics	,,	22,328	12,017	1,320	665,538	2,068	1,078,410	2,870	1,601,598
Artificial Fibre Fabrics	,,	1,165,827	79,867	62,459	4,307,360	7,908	7,205,894	112,240	7,372,834
Non-Metallic Mineral Products	—	—	41,241	—	2,716,350	—	3,154,073	—	3,896,454
Cement	m.t.	2,111,670	13,681	196,162	1,203,891	172,385	1,064,973	237,280	1,502,166
Glass Products	—	—	5,692	—	356,085	—	447,908	—	508,113
Chinaware	—	—	17,818	—	985,229	—	1,378,731	—	1,589,787
Precious Metals & Gems	—	—	9,724	—	536,910	—	851,622	—	939,679
Pearls	kg.	24,581	4,842	2,057	333,004	3,215	523,205	3,205	632,667
Base Metals	—	—	98,497	—	6,186,093	—	7,470,968	—	7,633,687
Iron & Steel	m.t.	1,290,540	80,420	63,537	4,732,952	82,675	6,162,719	78,286	6,033,727
Steel Bars & Shapes	,,	239,337	8,903	14,176	587,790	10,919	475,195	11,223	502,636
Steel Plates (ungalvanized)	,,	224,552	14,885	10,337	751,428	21,865	1,563,749	16,595	1,232,176
Copper	,,	8,366	3,574	282	112,039	190	85,139	1,878	193,938
Nickel	,,	3,413	4,485	485	720,554	276	459,579	319	522,646
Aluminium	,,	10,221	2,687	246	79,197	1,802	110,883	275	86,694
Metal Products	—	—	23,872	—	1,370,647	—	1,756,162	—	2,157,799
Machinery & Transportation Equipment	—	—	174,095	—	14,744,969	—	15,452,744	—	25,928,981
Machinery (excl. electric machines)	—	—	41,945	—	2,992,776	—	3,042,436	—	4,000,121
Metal Processing Machines	—	—	981	—	35,817	—	58,922	—	132,226
Textile Machines & Parts	—	—	13,203	—	1,047,266	—	853,921	—	1,126,475
Sewing Machines & Parts	—	—	14,231	—	1,076,725	—	1,180,658	—	1,355,115
Electric Machines	—	—	18,293	—	1,681,407	—	1,604,652	—	2,386,932
Gen. Motors, Trans. & Alternators	—	—	2,327	—	311,986	—	115,864	—	187,001
Electric Bulbs	1,000 pcs.	233,440	2,079	19,342	190,854	16,184	159,056	26,758	256,841
Transportation Equipment	—	—	113,857	—	10,070,786	—	10,805,656	—	19,541,928
Railway Rolling Stock	—	—	10,307	—	1,037,794	—	1,291,622	—	812,619
Buses, Trucks	unit	1,541	2,900	124	227,183	264	271,366	234	327,647
Bicycles & Parts	—	—	3,401	—	207,843	—	260,540	—	230,469
Ships	unit	786	93,590	83	8,444,236	82	8,758,496	57	17,869,278
Miscellaneous	—	—	111,221	—	6,352,949	—	8,584,427	—	10,724,222
Camera	unit	395,857	3,041	22,170	161,738	33,994	247,616	38,611	292,638
Toys	—	—	19,951	—	1,063,577	—	1,463,142	—	1,658,524
Livestock, Pets etc.	—	—	147	—	32,210	—	32,134	—	5,326
Re-export Goods	—	—	2,946	—	310,798	—	274,026	—	194,330
Total Exports	—	—	900,229	—	60,841,705	—	76,771,066	—	98,779,334

Note: Figures of group total include others than represented. Figures for value are rounded under one thousand.
Source: Customs Division, Tax Bureau, Ministry of Finance. * In million yen.

39. Imports by Major Articles

(In thousand yen)

Articles	Unit	1956 Total		1957 January		1957 February		1957 March	
		Volume	*Value	Volume	Value	Volume	Value	Volume	Value
Food	—	—	197,571	—	13,739,255	—	12,756,864	—	13,328,645
Cereals (rice, wheat & barley, etc.)	m.t.	4,399,730	132,914	296,739	8,295,172	218,479	6,116,236	197,254	6,018,490
Fruit & Vegetables	,,	96,575	5,685	12,164	527,651	2,976	892,664	20,872	1,038,351
Sugar & Sugar Preparations	,,	1,263,730	48,220	108,089	3,995,051	131,027	4,822,568	111,152	4,174,383
Coffee	1000. lbs.	11,125	2,412	840	201,576	865	205,953	1,273	281,771
Beverage & Tobacco	—	—	3,417	—	371,538	—	670,597	—	473,949
Tobacco	—	—	3,052	—	328,555	—	639,718	—	442,782
Raw Materials	—	—	615,744	—	63,527,779	—	65,460,159	—	74,426,714
Hides & Skins	m.t.	76,429	10,995	6,022	958,285	6,402	811,488	6,993	927,348
Cow Hide	,,	56,770	6,748	4,391	550,522	4,353	491,552	5,666	585,051
Box Calf	,,	9,284	2,872	959	309,031	707	212,796	826	254,676
Oil Seeds	,,	1,039,351	48,162	103,409	4,726,871	103,893	4,879,419	109,480	5,148,517
Peanuts	,,	8,848	780,551	961	75,099	596	57,344	605	58,924
Copra	,,	40,717	3,047	5,171	378,163	5,990	447,094	1,752	125,363
Soy-beans	,,	717,081	30,473	79,199	3,320,202	70,943	2,991,622	75,384	3,277,785
Rubber	,,	139,054	31,883	13,015	3,051,225	13,903	3,354,944	16,359	3,611,340
Crude Rubber	,,	106,881	26,457	9,662	2,542,383	10,297	2,729,699	12,668	3,045,293
Latex	,,	10,077	2,017	1,227	253,161	1,205	262,437	1,065	223,812
Synthetic Rubber	,,	10,764	3,100	910	218,687	1,326	328,667	993	306,322
Lumber & Cork	—	—	30,085	—	2,350,755	—	2,590,021	—	2,382,514
Lumber	c.m.	2,586,015	29,189	192,390	2,267,713	215,018	2,452,616	194,570	2,276,597
Cork	m.t.	9,180	830	905	80,710	1,246	128,328	800	99,637
Pulp & Scrap Paper	—	—	11,295	—	1,095,754	—	924,897	—	1,325,748
Fibres & Textiles	1,000 lbs.	2,061,544	277,859	190,218	25,647,451	216,920	28,071,159	225,489	32,996,497
Wool	,,	324,204	93,119	28,930	9,774,520	25,849	8,937,924	40,710	14,343,943
Cotton	,,	1,496,116	172,940	133,067	14,589,104	156,247	17,760,111	156,490	17,181,402
Cotton, Ginned	,,	1,325,182	162,515	123,910	14,070,773	147,854	17,013,433	140,396	16,316,396
Cotton Linter	,,	45,890	1,087	3,775	94,619	8,392	205,991	8,474	210,418
Waste Cotton	,,	125,043	9,338	5,220	404,591	6,723	540,627	7,620	654,572
Hard & Bast Fibres	,,	218,895	9,061	26,345	1,003,737	26,084	1,081,680	26,445	1,197,668
Jute	,,	77,286	2,526	10,081	290,857	12,617	446,864	10,678	407,839
Flax	,,	9,769	573	—	—	—	—	—	—
Sisal Hemp	,,	26,913	1,286	4,382	138,397	3,494	111,717	3,798	125,073
Manila Hemp	,,	69,503	3,513	8,856	408,194	6,774	403,574	8,792	517,455
Fertilizers & Non-metallic Minerals	—	—	34,458	—	2,839,245	—	3,113,716	—	3,742,550
Fertilizers	m.t.	1,700,262	15,244	96,748	968,993	125,065	1,232,166	129,989	1,376,874
Salt	,,	2,303,800	10,783	140,918	675,925	148,471	894,073	11,121	1,221,219
Asbestos	,,	33,388	2,346	7,801	509,072	5,313	386,587	2,376	181,746
Magnesite	,,	93,615	1,673	7,590	145,271	6,798	132,686	11,272	235,019
Metal Ores & Metal Scrap	,,	12,196,121	164,379	1,191,617	22,211,751	1,101,414	20,999,752	1,227,036	23,757,650
Iron Ore	,,	7,869,496	52,747	632,070	4,895,102	589,418	4,531,196	646,252	5,214,753
Scrap Iron	,,	2,583,542	66,027	384,249	11,789,591	214,658	9,963,412	328,552	10,699,663
Non-ferrous Metals	,,	1,679,421	27,820	165,009	2,717,391	186,051	3,574,722	239,704	4,444,672
Nickel	,,	655,142	6,135	64,949	676,306	53,742	567,685	103,850	1,133,981
Aluminium	,,	403,907	2,195	31,220	161,579	50,503	156,014	49,280	258,068
Manganese	,,	206,574	3,307	21,846	363,950	45,492	882,541	22,190	442,215
Animal Materials	—	—	2,902	—	201,904	—	184,741	—	214,863
Vegetable Materials	—	—	3,724	—	443,024	—	530,019	—	319,686
Coal & Petroleum	—	—	148,553	—	17,877,067	—	16,514,165	—	21,144,975
Coal	m.t.	3,821,168	32,622	528,835	5,168,943	368,806	3,603,582	398,249	3,872,859
Anthracite	,,	464,493	3,577	74,078	572,776	46,960	348,927	71,274	550,925
Bituminous (for coking)	,,	2,963,036	26,314	427,066	4,328,514	273,942	2,810,522	284,946	2,020,602
Petroleum	k.l.	15,130,332	112,824	1,478,788	12,295,027	1,422,607	12,599,031	1,764,447	16,919,409
Crude & Unrefined	,,	11,586,911	80,564	1,065,931	7,922,337	989,282	7,658,846	1,299,486	11,538,078
Gasoline	,,	152,782	2,652	13,855	279,883	27,542	408,868	1,521	32,223
Gas Oil	,,	106,761	1,113	—	—	3,995	47,153	13,528	159,519
Heavy Oil	,,	3,164,794	25,181	392,518	3,792,083	296,789	4,241,859	434,999	4,770,178
Lubricants (excl. grease)	,,	52,789	2,597	5,905	293,411	3,836	190,136	5,515	295,231
Petroleum Coke	m.t.	220,494	2,489	28,838	359,909	24,160	314,625	11,323	183,295
Animal & Vegetable Oils	—	—	12,115	—	917,861	—	887,351	—	1,117,245
Animal Fats & Oils	m.t.	105,957	8,046	7,989	636,516	8,604	674,444	8,372	664,180
Vegetable Oils	,,	34,023	3,732	1,658	241,616	1,214	171,509	3,523	407,553
Chemicals, Drugs	—	—	58,789	—	4,570,222	—	6,172,034	—	6,252,045
Manufactured Products by Materials	—	—	56,040	—	10,734,001	—	14,281,898	—	15,203,119
Hides, Leathers & Furs	—	—	1,342	—	88,854	—	27,519	—	97,924
Rubber Goods	—	—	499	—	65,530	—	39,809	—	43,344
Paper & Related Products	m.t.	1,308	314	146	50,470	267	49,169	••	41,109
Textile Yarns & Fabrics	—	—	4,591	—	673,676	—	522,902	—	765,908
Base Metals	m.t.	597,073	42,481	149,543	9,238,249	177,808	12,975,761	184,044	13,376,061
Iron & Steel	,,	532,497	21,904	139,318	6,548,777	160,345	7,828,713	165,275	8,817,208
Nonferrous Metals	,,	64,576	20,577	10,225	2,689,472	17,463	5,147,048	18,769	4,558,853
Machinery & Transportation Equipment	—	—	58,021	—	5,054,205	—	5,903,814	—	8,194,131
Machinery (excl. electric machines)	—	—	38,799	—	3,809,287	—	4,354,418	—	6,192,503
Electric Machines	—	—	8,149	—	457,218	—	399,700	—	689,480
Transportation Equipment	—	—	11,073	—	787,700	—	1,149,696	—	1,312,148
Miscellaneous	—	—	11,517	—	1,033,257	—	1,028,631	—	1,167,281
Livestock, Pets etc.	—	—	123	—	20,817	—	13,442	—	14,664
Re-imports Goods	—	—	814	—	224,835	—	208,937	—	140,411
Total Imports	—	—	1,162,704	—	118,070,837	—	123,897,892	—	141,463,179

Note: Figures of group total include other items not represented above. Figures for value under one thousand are rounded.
Source: Customs Division, Tax Bureau, Ministry of Finance, * In million yen,

40. Spot Quotations on Tokyo Securities Exchange

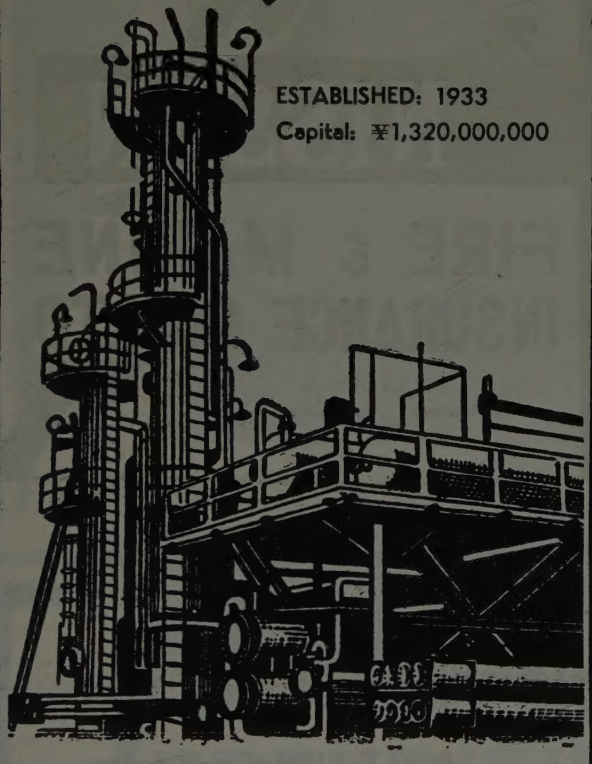
Names of Shares	Authorized (Paid-up) Capital In million yen	Dividends	1957 May High	1957 May Low	1957 June 15
		%	¥	¥	¥
Mining					
Mitsubishi Metal Mining	2,730	18	116	98	103
Nihon Mining	5,670	18	118	80	91
Sumitomo Metal Mining	2,145	18	109	90	91
Mitsui Metal Mining	2,400	18	120	99	105
Mitsui Mining	3,000	10	119	78	98
Mitsubishi Mining	2,700	12	123	89	103
Sumitomo Coal Mining	1,200	12	125	90	113
Furukawa Mining	2,100	12	112	100	105
Ube Industries	6,000	20	141	113	121
Teikoku Oil	2,000	12	167	101	145
Dowa Mining	1,500	25	142	119	125
Foodstuffs					
Nippon Suisan	3,500	15	95	80	85
Nippon Flour Mills	864	17	111	100	110
Nisshin Flour Milling	1,000	16	130	123	126
Dainippon Sugar Mfg.	720	25	162	137	152
Taito	300	45	305	256	276
Meiji Sugar Mfg.	500	30	157	137	149
Toyo Sugar	366	30	196	171	180
Japan Beet Sugar Mfg.	675	20	142	108	124
Morinaga Confectionery	750	20	167	148	154
Meiji Confectionery	840	20	149	128	129
Nippon Breweries	1,825	20	151	126	139
Asahi Breweries	1,825	20	165	147	151
Kirin Brewery	1,845	30	195	181	184
Takara Shuzo	3,927	20	100	84	88
Japan Distilling	1,155	20	65	55	57
Honen Oil Mills	1,000	20	144	124	129
Nissin Oil Mills	750	25	111	101	110
Noda Soy Sauce	800	25	230	202	215
Ajinomoto	2,296	25	221	183	198
Nippon Cold Storage	2,000	16	114	97	100
Textiles					
Toyo Spinning	6,450	24	185	156	166
Kanegafuchi Spinning	3,738	18	114	99	106
Dai Nippon Spinning	5,250	18	110	96	99
Fuji Spinning	3,000	18	106	95	98
Nisshin Cotton Spinning	1,560	32	211	174	189
Kurashiki Spinning	2,600	25	115	98	108
Nitto Spinning	1,700	15	81	72	74
Ohmi Kenshi Spinning	2,000	10	67	53	58
Japan Wool Textile	2,560	20	139	116	122
Daito Woollen Spinning	1,500	18	99	82	85
Chuo Textile	500	10	60	50	51
Teikoku Rayon	4,800	20	149	121	131
Toyo Rayon	6,000	20	228	200	218
Toho Rayon	1,500	20	118	95	106
Mitsubishi Rayon	2,250	20	119	110	111
Kurashiki Rayon	3,000	15	145	109	125
Asahi Chemical	(B) 3,675	22	446	390	402
Paper & Pulp					
Kokoku Rayon	3,000	12	68	56	59
Sanyo Pulp	2,610	20	130	113	115
Nippon Pulp Ind.	1,600	20	126	107	117
Kokusaku Pulp	1,680	20	113	100	108
Tohoku Pulp	2,028	20	116	101	107
Oji Paper	1,600	25	254	233	240
Honshu Paper	2,000	8	113	85	90
Jujo Paper	1,120	30	294	263	275
Mitsubishi Paper Mills	1,080	15	99	82	86
Hokuetsu Paper Mills	900	10	71	60	61
Chemical Industries					
Toyo Koatsu Ind.	3,600	15	145	115	133
Nitto Chem. Ind.	2,382	8	124	115	121
Showa Denko	4,400	15	170	130	151
Sumitomo Chemical	4,000	15	166	133	149
Shin Nippon Chisso Hiryo	2,400	15	121	88	98
Nissan Chemical Ind.	2,080	15	108	□ 72	87
Nippon Soda	1,508	15	149	96	114
Toyo Soda	1,200	15	105	74	84
Toa Gosei Chemical Ind.	2,400	20	149	118	128
Electro-Chemical Ind.	2,244	20	143	115	124
Shin-etsu Chemical Ind.	980	15	114	78	95
Mitsui Chemical Ind.	1,600	15	159	117	126
Kyowa Fermentation	1,399	18	143	111	120
Dainippon Celluloid	2,000	15	93	73	78
Nippon Chemical Ind.	800	20	117	87	94
Sankyo	780	20	149	127	130
Kansai Paint	600	20	127	102	108
Fuji Photo Film	2,500	18	139	117	122
Konishiroku Photo Ind.	1,800	12	86	67	68

Names of Shares	Authorized (Paid-up) Capital In million yen	Dividends	1957 May High	1957 May Low	1957 June 15
		%	¥	¥	¥
Coal & Petroleum					
Nippon Oil	4,500	15	117	92	107
Showa Oil	2,550	20	140	114	137
Maruzen Oil	2,625	20	194	146	175
Mitsubishi Oil	2,400	20	202	164	189
Toa Nenryo Kogyo	4,738	*56	176	151	165
Mitsubishi Chemical Ind.	3,966	15	129	104	120
Rubber, Glass & Ceramics					
Yokohama Rubber	1,000	12	230	190	219
Asahi Glass	5,000	20	207	174	188
Nippon Sheet Glass	1,200	20	278	240	261
Nihon Cement	5,000	18	142	115	122
Iwaki Cement	1,000	26	330	270	282
Onoda Cement	6,400	16	109	94	100
Nippon Toki	520	25	205	178	176
Nippon Gaishi	500	23	234	196	205
Metal Industries					
Yawata Iron & Steel	15,000	12	77	70	75
Fuji Iron & Steel	13,000	12	74	67	72
Kawasaki Steel	6,252	5	71	68	65
Nippon Kokan	15,000	15	79	70	73
Sumitomo Metal Ind.	5,000	12	94	70	80
Kobe Steel	7,968	12	66	56	60
Tokyo Rope	485	30	213	175	199
Japan Light Metal	2,995	15	188	150	160
Toyo Seikan	(A) 800	25	1,245	1,125	1,100
Machinery					
Ebara Mfg.	600	25	209	165	186
Nippon Seiko	800	15	186	148	160
Toyo Bearing	600	20	202	155	173
Koyo Seiko	700	15	128	104	108
Electric Machinery					
Hitachi Ltd.	15,000	15	128	112	100
Tokyo Shibaura Electric	9,588	15	97	82	100
Mitsubishi Electric	5,400	15	118	98	110
Fuji Electric Mfg.	2,400	15	140	117	123
Furukawa Electric	3,000	12	120	96	104
Nippon Electric	2,000	15	138	105	118
Transportation Equipment					
Mitsubishi Shipbuilding & Engineering	5,600	12	113	83	90
Mitsubishi Nippon Heavy Ind.	3,000	10	110	78	90
Mitsui Shipbuilding & Engineering	2,240	15	122	95	104
Mitsubishi Heavy Ind. Reorg.	5,600	12	127	98	90
Ishikawajima Heavy Ind.	2,600	12	90	70	72
Nissan Motor	4,200	15	151	108	121
Isuzu Motor	3,000	16	119	95	201
Precision Machinery					
Nippon Kogaku	465	15	140	105	121
Canon Camera	800	25	162	145	149
Other Manufacturing Industries					
Toppan Printing	500	23	130	112	114
Nippon Musical Instrument	450	18	188	170	175
Trading Companies					
Mitsui Bussan	1,755	20	169	116	134
Mitsubishi Shoji	5,000	14	126	90	101
Mitsukoshi	2,430	26	262	220	239
Real Estate					
Mitsui Real Estate	420	15	407	335	358
Mitsubishi Estate	2,064	18	231	182	201
Heiwa Real Estate	1,323	12	339	233	255
Transportation & Shipping					
Tobu Railways	1,600	13	126	121	115
Tokyo El. Express Railway	3,000	13	111	101	105
Nippon Express	(B) 10,800	16	248	219	180
Nippon Yusen	11,400	—	62	50	50
Osaka Shosen	7,600	—	55	42	45
Nitto Steamship	6,000	12	81	57	61
Mitsui Steamship	5,500	—	70	50	53
Iino Kaiun	13,200	8	71	51	57
Mitsubishi Shipping	4,800	8	78	53	57
Warehouse & Entertainment					
Mitsubishi Warehouse	600	12	131	97	108
Shochiku Motion Picture	1,848	15	125	118	120
Nikkatsu	3,287	5	76	47	60

Notes: (A) 500 yen shares. (B) 100 yen shares, others 50 yen. □ ex-new, * share dividends.

OIL

Oil Refining



ESTABLISHED: 1933
Capital: ¥1,320,000,000

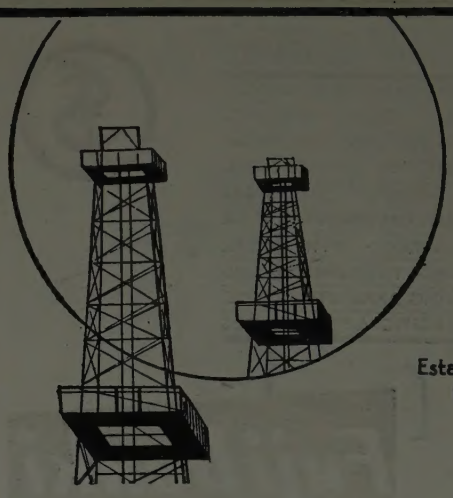
KOA OIL CO., LTD.

(KOA SEKIYU KABUSHIKI KAISHA)

President: Eizaburo Noguchi

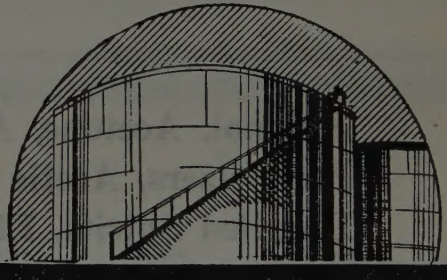
Head Office: No. 2, 1-chome, Marunouchi, Chiyoda-ku, Tokyo

Refinery: Marifu, Yamaguchi Prefecture



Established: 1941

Recovery of crude oil and natural gas. Production and Sales of compressed gas, liquefied gas, petroleum products (benzine, rubber, solvent, motor gasoline, butane) and alloy.



TEIKOKU OIL CO., LTD.

Head Office:
No. 317, 2-chome, Higashi-Okubo, Shinjuku-ku, Tokyo

♦

Cable Address:
"TEIKOKUSEKIYU TOKYO"

PRINCIPAL PRODUCTS

ELECTRICAL AND MECHANICAL EQUIPMENT FOR POWER PLANTS AND SUB-STATIONS · ELECTRICAL EQUIPMENT FOR CHEMICAL AND TEXTILE INDUSTRY · ELECTRICAL EQUIPMENT FOR MINING, MARINE AND RAILWAY · W.H. METERS, MEASURING INSTRUMENTS AND REGULATING APPARATUS·HOUSEHOLD ELECTRIC APPLIANCES

Fuji Denki Seizo K.K.

Fuji Electric Mfg. Co., Ltd.

Cable Address:
"DENKIFUJI" Tokyo

HEAD OFFICE:
6, 2-Chome, Marunouchi, Chiyoda-ku, Tokyo

FIRE . . . . . MARINE
TRANSIT . . . ACCIDENT
AUTOMOBILE . . FOREST
BURGLARY. . . LIABILITY

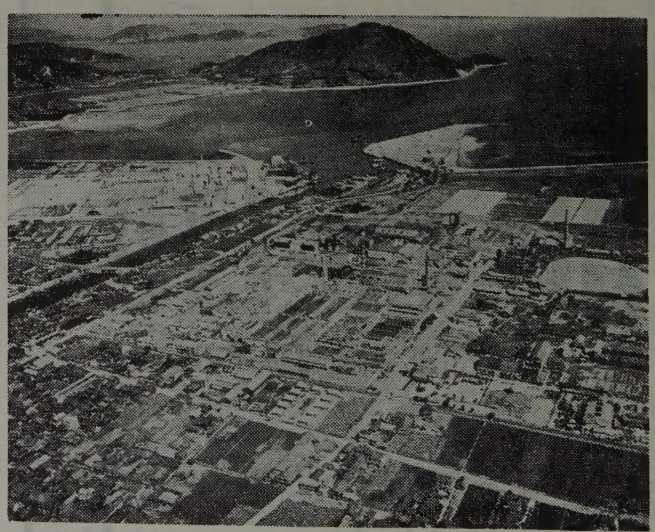
The NISSAN

FIRE & MARINE INSURANCE CO., LTD.

HEAD OFFICE:
2, 1-chome, Shiba Tamura-cho,
Minato-ku, Tokyo

Butanol, Acetone, Alcohols,
Plasticizers, Acetic Esters, Streptomycin,
Distilled Spirits, Etc.

Bird's Eye View of Hofu Factory



President - - - Benzaburo Kato

Head Office:
Daiichi Seimei Bldg.,
9 1-chome, Yuraku-cho, Chiyoda-ku, Tokyo
Tel: (28) 1511 (10)

Factories: Hofu, Sakai, Fuji, Morioka, Nishinomiya, Setaka, Tokyo, Tochigi, Tsuchiura

KYOWA HAKKO KOGYO K.K.

Nihonbashi-Edobashi, Chuo-ku, Tokyo
Tel: 27-2551, 2561, 2571 Cable Address: STEELFUJI TOKYO

YAMAICHI SECURITIES CO., LTD.

Brokers and Investment Bankers

Your orders for both Japanese and American securities are solicited

Free information available

HEAD OFFICE:
Kabuto-cho, Nihonbashi,
Tokyo
Foreign Dept. Tel: 67-3992

NEW YORK OFFICE:
111 Broadway, New York
Tel: COrtlandt 7-5680

DAIWA BANK

Authorized Foreign Exchange Bank

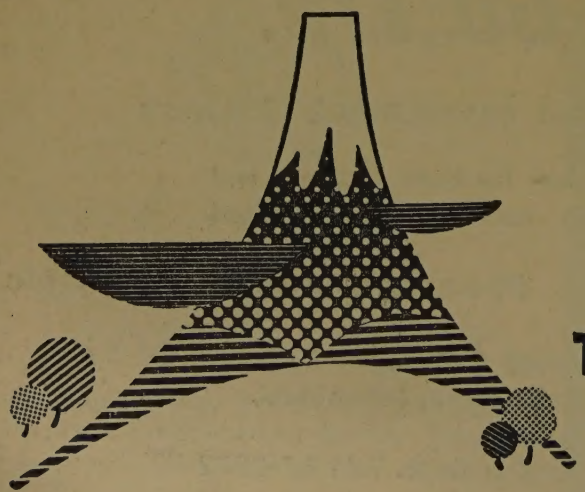
AUTHORIZED CAPITAL ¥10,000,000,000
CAPITAL (PAID-UP) ¥ 4,400,000,000

THE **DAIWA BANK** LIMITED

HEAD OFFICE IN OSAKA WITH 100 BRANCH OFFICES THROUGHOUT JAPAN
AND A REPRESENTATIVE OFFICE IN NEW YORK

Founded in 1880

Trade promotion is our specialty



Japan's largest commercial bank

The FUJI BANK Ltd.

HEAD OFFICE: Chiyoda-ku, Tokyo

187 branches throughout Japan

Overseas

London Branch: Salisbury House, Finsbury Circus, London E.C. 2
New York Agency: 42 Broadway, New York, N.Y.
Calcutta Representative Office: Mookerjee House, 17 Brabourne Road, Calcutta-1